



U.S. Department of  
Transportation

# Risk Management Manual for the Public Transit Industry

Volume 1

August 1988



**UMTA Technical Assistance Program**



# **Risk Management Manual for the Public Transit Industry**

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Volume 1  
August 1988

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# I. INTRODUCTION TO RISK MANAGEMENT

## GOALS OF THIS MANUAL

The goal of this manual is to acquaint transit systems with risk management and to explain how to develop, implement and administer a risk management program. Commercial insurance although a viable way of protecting an organization against loss, and the traditional approach for public agencies to handle risk, should be considered only as one option or element in the risk management process. It can be the most expensive option for protecting against loss, in direct monetary cost and in secondary costs such as reduced managerial control. While commercial insurance is used, as appropriate, generally to finance catastrophic losses, reliance on commercial insurance has become outdated. Organizations now take on broader responsibilities to control, manage and finance their risk through proactive and dynamic initiatives.

This manual is a practical guide to implementing risk management programs. Explanations of the different elements of the risk management process are illustrated by applications to hazardous situations particular to the transit industry. Sample ready-to-use forms, checklists, worksheets, and questionnaires are included.

It may appear at first that implementation of a risk management program will require substantial effort. Risk management encompasses many activities and brings new responsibilities to all departments in a transit organization. The number of suggested tasks listed in this manual may be overwhelming. However, many transit systems now perform many of the activities described, although probably not as part of an organized and documented risk management program. The intention of this manual is to assist managers in organizing these diverse activities, with the addition of some improvements, into a risk management framework which can be integrated into the day-to-day operations of a transit system. The objectives for doing so are simple: to increase managerial control over risks and to reduce total loss-related expenditures.

The specific implementation timeframe will vary from place to place since many factors influence an organization's risk management program. Generally, a six-month to one-year implementation period can be expected. Staff effort needed to design and administer a risk management program will vary by transit system size, modes operated, organizational structure, and local operating conditions.

In general, risk management requirements increase with transit system size and number of modes operated: larger and more complex systems have more risk exposures. Managers of small transit systems are able to acquire a hands-on knowledge of a relatively small number of facilities, equipment, and vehicles. Their counterparts at larger transit systems must rely on communication with their subordinates and written documentation. Risk management documentation requirements at larger systems are therefore often greater. Similarly, the risk



management requirements of rail transit systems are greater than bus systems since rail transit includes exposure to more and greater risks.

The organizational structure of a transit system may also influence risk management responsibilities and costs. A transit system that is part of a city government may be able to transfer some risk management functions to a centralized municipal risk management office, thereby reducing some responsibility. Insurance purchasing, for example, may be transferable.

Local conditions also affect the level of effort needed to reduce potential loss exposures. Environmental and internal factors include:

- . relations with labor unions
- . likelihood of claims and lawsuits
- . general level of criminal activity in the community (e.g., vandalism, theft, assault)
- . traffic conditions
- . weather conditions
- . quality of the labor force
- . condition of transit system vehicles and facilities.

In summary, the message is not to be overwhelmed by the magnitude of the risk management program suggested in this manual. Not all elements will apply to every transit system. Many of the activities described are probably already being conducted; in other areas new ideas may be phased in over a reasonable time period. Review the sections, consider a comprehensive structured approach to protect assets against loss, and select the recommendations that make sense for your transit system.

Understandably, not all aspects of risk management or all possible exposures can be addressed here. Therefore, the manual should be viewed as a guide to action; new and better ideas will occur to you as you get underway. Be creative and do what works best for your organization. A word of caution: as this manual can only give a general overview of liability and risk management, do not use it as a substitute for legal advice on specific issues. It is essential to identify and comply with all Federal, state, and local laws that apply to your organization.

## HOW TO USE THIS MANUAL

The manual is a series of chapters, each of which can be used alone.

- . Chapter I: Introduction to Risk Management introduces the concept of risk management; explains the steps in the risk management process; and examines the commercial insurance marketplace and its impact on transit systems. A glossary of terms is included as an appendix.
- . Chapter II: Risk Identification and Evaluation describes risk areas, methods for identifying hazards, and a framework for evaluating loss potential.
- . Chapter III: Loss Control Methods discusses how a transit system can set up and administer an organization-wide loss control program and lists specific operational actions it can undertake to reduce loss expenditures.
- . Chapter IV: Risk Financing presents methods for assuming the financial responsibility for all or part of potential losses. The chapter describes self-insurance, risk retention groups, pooling, and captive insurers.
- . Chapter V: Risk Transfer covers commercial insurance purchasing and non-insurance transfer of risk. It includes definitions of insurance concepts and terminology and methods of obtaining coverage. The chapter also provides some do's and don'ts in negotiating an insurance policy.
- . Chapter VI: Claims and Crisis Management describes the requirements for maintaining information to support risk management, including processing, adjusting, investigating and, when necessary, litigating claims and preparing for and responding to a crisis. It discusses information systems and their contribution to risk identification and loss control.
- . Chapter VII: Use of Outside Assistance offers suggestions for selecting and working with consultants, brokers, and agents; discusses types of outside services available; and provides assistance in writing bid specifications and requests for proposals.
- . Chapter VIII: Risk Management Resources lists periodicals and books on risk management and identifies organizations involved in risk management.

Each chapter is self-contained; however, we suggest that you read all of this introductory section before consulting subsequent chapters.



## **COMMERCIAL INSURANCE MARKETPLACE<sup>1</sup>**

In this part the insurance problems of public transportation systems in the United States are summarized, beginning with a brief review of the characteristics of the commercial insurance marketplace. Factors contributing to the industry's cyclical nature are explained, together with a discussion of the cycles' impacts on insureds. This is followed by findings concerning the nature and extent of insurance problems faced by U.S. transit systems. Experiences during easy and tight insurance environments are discussed as well as the relationship between the loss history of transit systems and insurance premium rates. These findings are based largely on data gathered by the Urban Mass Transportation Administration (UMTA) and the Congressional Committee on Public Works and Transportation.

### **Insurance Market Cycles**

Transit systems and other insurance buyers enjoyed low premiums for coverage for a number of years because of a "soft" insurance market. With the arrival of the "hard" market of the mid-1980s, buyers were alarmed by a sudden disappearance of low insurance rates or coverage itself.

The key to understanding the insurance industry's operations is recognizing that the market is cyclical. There are periods when rates are low, limits are high and all types of coverage are readily available. Such a "soft" market can be a buyer's bargain basement. It is generally followed, however, by opposite conditions: prices are higher, limits are harder to reach, and coverage is difficult to obtain for certain types of activities. In such a "hard" market the seller is in control.

The last hard market before the one begun in 1984 occurred in the mid-1970s. By the early '80s high interest rates and competition for premiums among insurers softened the market leading to some of the lowest prices for insurance premiums and broadest coverages in the history of the insurance industry. In the mid '80s insurers reported unprecedented underwriting losses and achieved substantially lower returns on their investments, since interest rates had declined. This resulted in widespread premium increases and a general lack of available insurance.

### **Economic and Regulatory Influences on Insurers**

The reasons for cycles like those described above vary, but can be generally tied to insurers' sources of income, insurers' expenses and regulatory constraints. These three factors and their effects on insurance prices and availability are summarized below.

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<sup>1</sup>Concepts introduced below are defined in the glossary and discussed in subsequent sections of this manual.

Insurance Income from Premiums and Interest. The insurance industry generates its income largely from two sources: premiums paid by insureds, and interest and investment income earned on collected premiums. When interest rates are high for an extended period, insurers compete for premium dollars, resulting in low insurance premium costs to the customer. During such a period, insurers cut prices and extend policies into areas of higher risk and exposure, in order to acquire as much cash as possible for investment in high-earning financial instruments. High levels of investment income compensate for underwriting losses generated by high risk, large claim policies.

Expenses for Settlements in Claims. In 1984, the insurance industry reportedly experienced its highest accumulated losses since 1906. Since collected premiums were not adequate, insurers consumed a portion of their surplus assets to pay claims. In an attempt to generate enough premiums to cover further claims, insurers raised premiums on most policies and eliminated coverage for many groups they viewed as excessively risky (whether this risk was real or perceived.) The increases in transit insurance premiums probably were a result of a perception of risk and not on a thorough analysis of the claims history of the transit industry.

Capacity Constraint Regulations. Insurers are restricted by state regulations that protect policyholders by imposing "capacity constraints" (i.e., a reserve ratio). Insurers must typically maintain a 3:1 ratio of net premium (i.e., total new and renewal premiums minus costs minus reinsured premiums) to surplus (i.e., net worth or assets). When insurers deplete their surplus because claim costs exceed premium dollars and when interest income does not compensate for the underwriting loss, their capacity to provide insurance is restricted. In short, higher premiums and limited surpluses restrict an insurer's capacity to write new business. Insurers are forced to limit the number of new accounts they can provide insurance to and to raise premiums on existing policies to their "acceptable" levels.

### **Impacts of Insurance Cycles on Insureds**

The impact on insureds of a swing from a soft to a hard market can be sudden and significant. Three major aspects of insurance policies are typically affected: availability; coverage; and cost.

Avoidance of "Higher Risk" Policies and Unknown Markets. During hard markets, higher risk (either real or perceived) and new or unfamiliar market areas are avoided by insurers. Higher risk areas include industries that may produce high claims from numerous claimants or that may sustain high damage levels. Insurers retreat to known and low risk areas until surplus assets are again available to expand coverage.

Reductions in Coverage Requiring Increased Levels of Self-Insurance (SIR). Insurance is generally purchased in layers. The first layer, insurance against smaller and more frequent claims, has the highest risk and therefore the highest premium cost. To build profit into their underwriting, insurers increase the premium costs at this layer or do not provide this insurance coverage to high risk applicants.



Insurers will often raise the "self-insured retention" (SIR) level. The costs of the SIR level, paid from operating or reserve funds, must be planned for or funded annually. Sudden increases in these costs can disrupt operating budgets.

Cost Increases for Both Primary and Excess Insurance. Insurance above the initial or primary layer, which is referred to as excess insurance, is obtained in multiple layers, generally at decreasing costs for each successive layer. Excess insurance is retained to avoid catastrophic losses and is generally infrequently used. The cost of both primary and excess insurance increased several orders of magnitude during the mid-1980s and in some cases was very difficult to obtain because of insurance market conditions and limitations on insurers that both reduced competition and encouraged the avoidance of high risk exposure.

Because of the insurance market's cyclical pattern, it is important not to become financially or operationally dependent on commercial insurance for protection against losses. A long soft market can lull both public and private organizations into dependency. In-house capabilities to handle risk management issues are abandoned in favor of cheap insurance. The result is that when a hard market returns, there is no managerial expertise nor financial resources available to handle the changing situation.

## **Transit Systems and the Insurance Market**

In 1985, UMTA collected information to assess the nature and extent of the insurance problems of the U.S. transit industry. These efforts included a review of secondary data on urban transit and the collection and review of primary data on the coverage characteristics and loss experiences of urban transit systems. The review of secondary data was based on data provided by transit systems through the Urban Mass Transportation Industry Uniform System of Accounts and Records Reporting System (the UMTA Chapter 15 System). Primary data were collected from a sample of U.S. transit systems in October 1985 to augment UMTA's picture of the industry's loss experience and vehicle liability insurance coverage characteristics (including premium cost, coverage limits, and availability of insurance). Data from 37 transit systems were collected and analyzed.

### **Experiences During The "Soft" Insurance Market**

During the first half of the 1980s, insurance coverage was readily available, as well as affordable to transit systems throughout the United States. Policy renewal seems to have been routine, as insurers competed for revenues for investment. The approaches used by transit systems to address their insurance needs varied in terms of the extent of risk that was assumed by the transit system and the extent to which the administration of claims and related data was handled in-house. By and large, smaller transit systems (under 100 motor buses) obtained first-dollar insurance coverage with a primary limit of \$1 million and total coverage of between \$1 and \$10 million. On the other hand, larger transit systems usually had insurance

coverage with a self-insured retention (SIR) ranging from \$25,000 to \$500,000 and total coverage limits ranging from \$5 to \$50 million.

Total casualty and liability expenses, including insurance premiums and paid-out losses, represented on average about 2 to 4 percent of total transit industry operating expenses between 1981 and 1983, or approximately \$178 to \$280 million per year. During this period, these casualty and liability expenses declined as a percentage of total operating expenses for most transit systems, reflecting the soft commercial insurance market. For the largest systems, casualty and liability costs represented almost 5 percent of their total operating expenses in 1981 and only 2.4 percent by 1983. This pattern is repeated in all transit system size groups. In all cases, the average casualty and liability expenses either increased less or decreased more than the total average transit operating expenses.

### **Experiences During The "Hard" Insurance Market**

In 1985 both the cost and availability of insurance coverage changed for U.S. transit systems as the hard commercial insurance market emerged. The industry had some added difficulty in obtaining insurance since it had been excluded as a class from certain reinsurance treaties because it was viewed as a high risk industry. The aviation and maritime industries for example, are similarly excluded.<sup>1</sup> Consequently, transit insurance had to be renegotiated as an exemption for reinsurance, which during the hard market made its placement more difficult and/or more costly.

Difficulties in obtaining reasonably priced insurance increased with decreased competition among transit insurers. Several insurers that had served the transit industry left the market either permanently or temporarily.

Contract service with private operators and other new services experienced particular difficulty since they were new types of transit service with no claims history and often had smaller (higher-risk) vehicles. Often, the premiums charged for coverage approached the value of protected assets. For example, a new system in the Southwest was seeking insurance with a SIR of \$10,000 and excess coverage to \$50,000. An annual premium of \$10,500 was quoted. The system's annual capitalization cost for the vehicles was about \$16,000.

Of the 37 transit systems surveyed by UMTA in the fall of 1985, increases accepted on insurance premiums ranged from 3 to 832 percent. Insurance premium cost increased further throughout 1985. More specifically, the transit systems that renewed their coverage between October 1984 and June 1985 experienced an average increase in premium cost of 132 percent, while those transit systems with

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<sup>1</sup>Reinsurance may be defined as contractual arrangements under which one insurer buys insurance from another to cover some or all of the losses incurred by the first insurance company under insurance contracts it has or will issue.



renewals after July 1, 1985, experienced average increases in their premium costs of 334 percent.

These findings suggest that while the insurance problems of transit systems in urban areas involved both affordability (i.e., cost) and availability during 1985, affordability was the greater concern. Virtually all systems surveyed were able to obtain insurance coverage in 1985, although at higher costs than in 1984. The data indicate that increases in premium costs were often accompanied by decreases in coverage and that some transit systems were faced with unacceptable renewal conditions which resulted in their becoming uninsured.

Most of the smaller transit systems appeared to have maintained their first dollar coverage but often could not obtain their prior limits. Decreases in coverage ranged from 17 to 86 percent. Increases in premium costs ranged from 3 to 524 percent for the smallest (less than 35 buses) of the surveyed systems.

The larger transit systems (i.e., those with 100 to 500 motor buses) were equally or even more severely impacted by changes in the insurance market than the smaller systems. Their premium costs rose, often accompanied by increases in SIR and decreases in total coverage limits. Although some large transit systems were able to maintain their SIR, others experienced increases of over 100 percent. Reported decreases in total coverage limits of 50 percent were not uncommon. The resulting adjusted premium cost increase per bus was almost 300 percent for transit systems with 100 to 300 buses and about 175 percent for systems with 300 to 500 buses.

### **Relationship Between Losses and Premium Rates**

The loss history of transit systems in this period does not appear to be directly linked to insurance premium rates. This statement is based on a review of secondary data in the Chapter 15 reports 1981-1985, and premium rates and loss data reported for 1983 through 1985.

The industrywide data reported to UMTA on accidents and injury suggest that the safety record of transit systems improved between 1981 and 1983, with regard to the frequency of accidents. It is not clear whether or to what extent this may have contributed to the annual decline in casualty and liability expenses during this period. Chapter 15 Reporting requirement data are of limited value in assessing total casualty and liability expenses between 1981 and 1983 because:

- . the data present the frequency but not the severity of accidents and injuries, thus presenting a limited view of total risk; and
- . the safety record of a given year is not fully reflected in the costs of that year, in particular premium costs, but in future years.

The reported accident and injury data suggest however, that a worsening in safety performance should not be offered as a reason for the significant casualty and liability premium cost increases of 1984 and 1985.

A review of the data provided by the 37 surveyed transit systems on losses for the three-year period 1983 through 1985 supports the earlier Chapter 15 data and the general conclusion that premium increases were not in response to the transit industry's loss experience. The larger systems, however, kept very detailed loss records. It is possible, however, that premium levels charged during the insurance market's soft cycle may have been lower than actuarially sound; thus, some of the upward premium adjustment in the mid 80's may have been justified by the existing claims experience.

The average number of claims per transit system per year for the entire sample for the three year period 1983 to 1985 showed decreases as follows:

- . 1983: 372 average number of claims per transit system
- . 1984: 359 average number of claims per transit system
- . 1985: 320 average number of claims per transit system

Average annual losses per 1,000 miles for four groups of transit systems during the three years were relatively stable at:

- . \$34.71 for systems with up to 35 buses
- . \$35.23 for systems having 36 to 100 buses
- . \$38.06 for systems having 101 to 300 buses
- . \$40.50 for systems having 301 to 500 buses

Recognizing that the data on loss experience are somewhat limited, some conclusions may still be made. Overall, the losses of the transit systems demonstrate that it is a low- risk industry. This is suggested by the fact that there were not a significant number of claims exceeding \$25,000--there were 34 in three years for the 37 surveyed transit systems. The average cost per claim was between \$500 and \$1,600 for the four size groups of transit systems. Only six claims and/or reserves exceeded \$100,000, with the largest reported being \$125,000.

Another indication that the U.S. transit industry is low risk is a comparison of the reported average losses between 1983 and 1985 to the 1985 premiums, adjusted to the \$1 million coverage limits with no deductible. This analysis shows that the loss ratios for all size groups were well under the 60 percent loss ratio sought by insurers. Only the largest size group exceeded the target level. Specifically, loss ratios for the surveyed transit systems were:

- . 34.4 for systems with up to 35 buses
- . 45.4 for systems having 36 to 100 buses
- . 39.3 for systems having 101 to 300 buses
- . 135.0 for systems having 301 to 500 buses

Based on these simplistic measures, losses do not appear to have warranted the most recent increases in insurance costs, especially for smaller transit systems. Unfortunately, transit systems, like so many other public and private organizations, cannot rely on their past safety performance to maintain or reduce insurance costs. It appears that, to a large degree, the insurance market may be beyond their control.

## RISK MANAGEMENT

Until the mid 1980's, liability and loss exposure were issues about which most transit managers' first and only thought was commercial insurance. But by 1984, transit systems, like municipalities, nonprofit organizations, and private corporations, found commercial insurance much more difficult to obtain. The cost of insurance premiums had skyrocketed, deductible values had significantly increased, and coverages were reduced. Cheap, easily available insurance, taken for granted for several years, had become extinct, creating a major managerial problem causing frustration and financial and operational difficulties for transit systems. It is now clear, that because of the cyclical nature of the commercial insurance marketplace, liability and loss protection issues should be addressed in the broader perspective of risk management.

Risk management is a structured process for reducing uncertainty about risks and for controlling losses. Five steps form the framework of the risk management process: each step consists of two or three major tasks.

1. Risk Identification - Understanding the different types of risk exposures and preparing an inventory of transit system risks.
2. Risk Evaluation - Estimating the loss potential of each identified risk.
3. Risk Treatment Analysis - Delineating and evaluating alternative methods for managing identified hazards, including loss control and risk financing.
4. Decision and Implementation - Selecting the combination of risk control and risk financing programs that best serves the organization's objectives; implementing the programs.
5. Monitoring - Assessing the results of risk management programs against objectives, identifying new exposures, and monitoring changes in risk



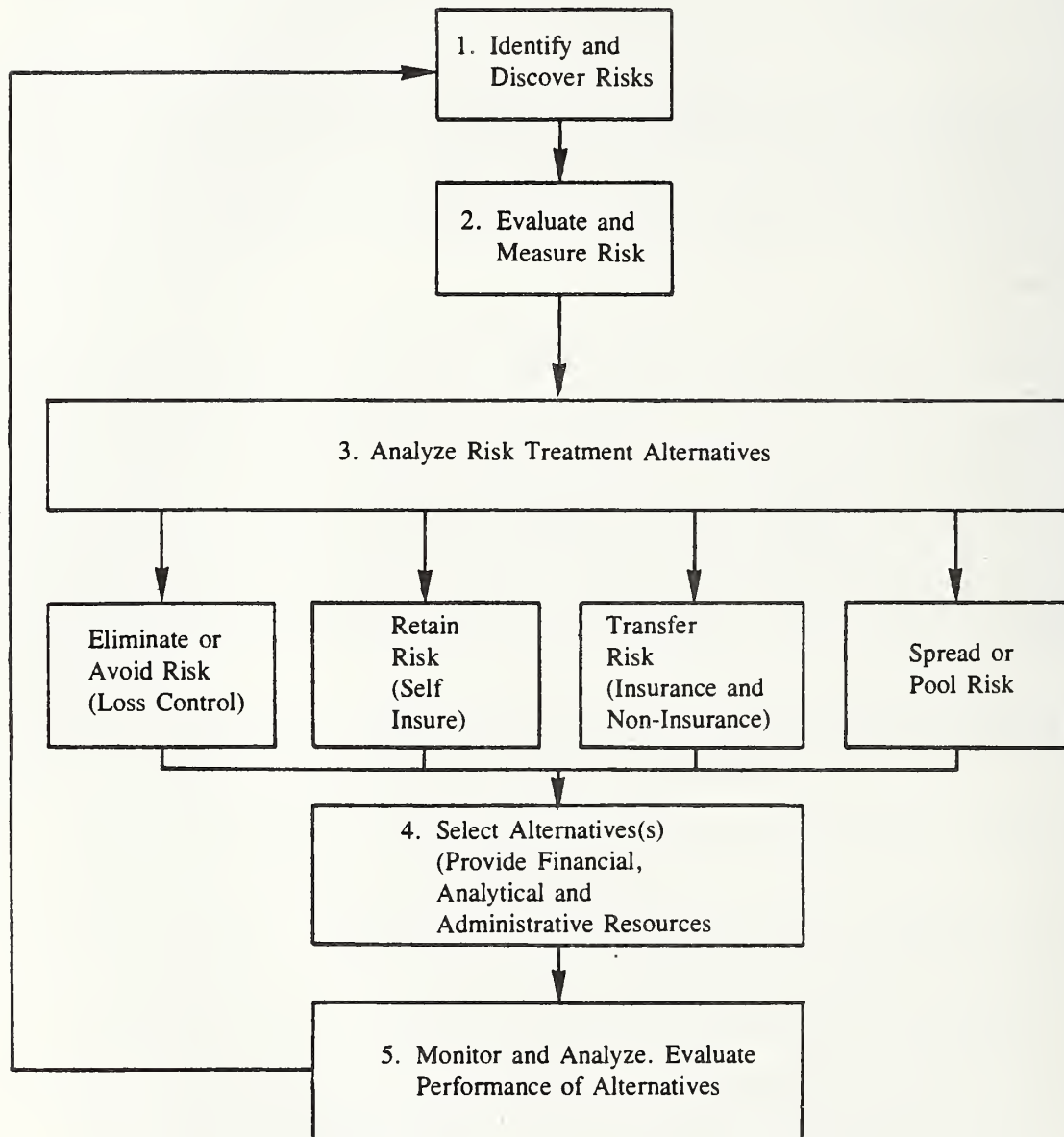
treatments, e.g., changes in risk financing programs or reductions in coverages, new safety equipment, new training courses.

As shown in Exhibit I.1 these steps are repeated continuously in the risk management process. Upon completing one cycle (steps 1-5) feedback from step 5 is used to refine decisions made earlier in steps 1-4. Then once again, the results of any program changes are monitored in step 5. Continual fine-tuning results in an effective risk management program responsive to changes in the organizations and in the environment.

\* \* \* \* \*

The importance of internal control over risk and its cost and the lack of control over commercial insurance are the principal rationale for developing the risk management programs described here. We highly recommend that all transit systems develop risk management programs to meet their organizational objectives including operational and financial stability.

**EXHIBIT I.1**  
**RISK MANAGEMENT PROCESS**



## **II. RISK IDENTIFICATION AND EVALUATION**

Risk identification is the first step to good risk management. All subsequent decisions concerning loss control and risk financing depend on the identification of risks; unless identified and evaluated, risks cannot be properly managed.

This chapter is divided into three sections which together describe how to conduct a risk identification and evaluation program. First, in order to heighten awareness of the numerous and often not very obvious areas of risk, five general categories of exposures are discussed. Next, several methods for conducting a systematic and comprehensive inventory of risk exposures are described. The final section suggests a framework for assessing risk potential and for selecting effective risk treatments.

### **TYPES OF RISK**

Transit systems face many risks in the course of their daily operations. Most fall into one of the following categories:

- . General liability
- . Public official, professional, and director and officer liability
- . Liability to employees
- . Property loss
- . Contractual liability
- . Business interruption

Each of these categories is discussed below.

#### **General Liability**

This category of liability is imposed by law and consists of the amount of loss payable to others outside the organization for injury or damage arising from operations. It applies to personal injury, bodily injury, and property loss or damage to a third party resulting from the negligence of the transit system or its employees.

Personal injury includes libel, slander, defamation of character, and invasion of privacy. Bodily injury refers to sickness, injury, and death. Property loss includes

damage or destruction of any third party property resulting from the negligence of the organization or its employees.

The riding public and the general public may both make liability claims for personal injury, bodily injury, or property damage. By law transit systems must take appropriate steps to identify potentially hazardous conditions.

### **Public Official, Professional, and Director and Officer Liability**

Public official and professional liability are well known risks in public service sectors. Public official claims are most prevalent in the areas of hiring, treatment and termination of employees. Suits that are especially likely are sexual harassment, racial harassment, breach of employment contract, and wrongful dismissal. The potential exposures include not only economic damages, but, in some states also punitive claims for intentional infliction of emotional distress.

Liability may also extend to professionals and licensed employees in the transit industry. Any licensed person may be said to provide a professional service and thus incurs certain liabilities. At a transit system several groups of employees are licensed: vehicle operators, some equipment operators, and white collar professionals in engineering, architecture, accounting, and legal services.

In terms of directors and officers liability, the public rightfully expects a high level of character, professionalism, and ethical conduct. Directors and officers must exercise reasonable care and diligence in carrying out their tasks. They are held accountable when tasks are grossly neglected or a wrongful act is committed, including breach of duty, neglect, misstatement, and omission. Negligence in financial management is the most common target of liability claims. Failure to maintain financial controls, misstatement of financial conditions, and waste of organization assets are serious claims against board members and officers.

Another potential claim is that the transit system is failing in its responsibility to provide services beneficial to the community. Such a claim might be triggered by board decisions to discontinue, reduce, or reallocate service or to build or not build new transportation technologies or facilities. Every decision will have both supporters and critics; board members must be able to defend their decisions with sound reasoning and objective facts.

The Board of Directors may also be liable for taking actions that exceed its granted authority. For example, a Board's decision to extend the service area beyond that provided in the transit system's charter would leave it exposed to a potentially legitimate suit.



## **Liability to Employees**

An employer's liability to its employees includes compensation for job-related accidents or occupational illnesses. Three types of exposures to employees are workers' compensation, employers liability, and occupational safety and health regulations.

State workers' compensation laws establish no-fault compensation for economic losses resulting from job-related injury or illnesses. Although state laws vary, the basic concept of no-fault coverage is the same. Workers' compensation ensures payments of reasonable medical expenses and replacement income for injuries on the job. In exchange for this assured compensation, employees agree that the workers' compensation benefits will be the exclusive remedy for the injury; employers are then generally exempt from damage suits.

An employer may be subject to employers liability claims, however, when the employer is liable for an injury or illness but the employee is not covered by the provisions of state worker's compensation laws such as in the case of a particular injury not being covered by workers' compensation provisions or the illegal employment of a worker.

The third area of employer liability involves regulations governing the safety of the workplace. Occupational safety and health regulations create liabilities in terms of compliance costs and penalties. Workplace safety guidelines are administered by the U.S. Department of Labor's Occupational Safety and Health Administration (OSHA), under OSHA approved state workplace safety programs, or by specific state laws.

## **Property Loss**

Physical property at risk includes real and personal property, whether owned or leased. The loss may result from fire, accident, or theft. Property may be destroyed, damaged or lost.

Of all a transit system's physical property, buses create most loss exposure. Risks include property damage to the vehicle itself in addition to liability claims by persons injured and property damaged as a result of bus operation. The specific types of liability are numerous and run the gamut from fender benders to life-threatening situations.

Another class of exposure is fidelity loss. This is the risk of possible embezzlement and fraud in the handling of the organization's finances. Losses range from the theft of cash to long-term embezzlement schemes, manipulation of records, and forgery.

## **Contractual Liability**

Contractual agreements with another party can create new exposures for a transit system. Contractual liabilities can arise out of leases, rental agreements, special service agreements, joint use agreements, cooperative ventures, construction contracts, service contracts with municipalities, and contractual labor. The general rule in handling contractual liability is to transfer as much of the responsibility as possible away from the organization, and to avoid assuming the responsibilities of others. Contractual devices for doing so include: hold harmless agreements, contractor insurance requirements, permission/waiver forms, and leases/ joint use agreements.

## **Business Interruption**

Service delivery may be reduced or stopped for a number of reasons. Strikes by employees, loss or reductions in funding, or major losses of vehicles or facilities all create risks. The costs for these actions include the loss of passenger revenues, reductions in public subsidies, and outlay of additional expenses to restore services and, possibly, facilities after a service interruption.

## **METHODS OF IDENTIFYING RISK**

Given this wide range of possible loss exposures, a transit system needs an organized and comprehensive approach to develop an inventory of its particular exposures. Several tools are available to assist in the task, including questionnaires, checklists, reviews of claims history, reviews of passenger complaints, reviews of documents, and use of risk management experts. It is important not only to identify the risk area, but also to collect information describing risk characteristics. For example, for a bus, other information such as the following should be documented: its cost, appraised value, age, condition, special or unique features and capabilities, and replacement cost. This information will assist in determining the appropriate risk treatment option. Information on the frequency and severity of losses associated with a particular area of risk should also be collected.

## **Questionnaires**

Questionnaires ascertain key information about an organization's assets and operations and can be designed to reveal loss exposures. Responses can assist in identifying and analyzing hazardous situations and potential liabilities. Since the major function of a formal questionnaire is documentation, respondents should be thorough and provide detailed descriptions. Field inspections are usually necessary to complete some questionnaire sections.

A sample risk management questionnaire is included as Appendix B. It consists of 11 parts:

- . general information
- . financial information
- . employee information
- . operations
- . building information
- . contents analysis
- . boiler and machinery
- . fleet information
- . business interruption information
- . crime and fidelity information
- . claims and loss information

The questionnaire should be completed by the managers responsible for each of these risk areas. Additional input should be sought from employees with day-to-day knowledge of the organization's operations. These include engineering, purchasing, human resources, operations, maintenance, legal services, security, computer services, communications, and emergency personnel. Employees can point out equipment that may be particularly vulnerable or hard to replace, operational bottlenecks that may impede service delivery, unsafe working conditions, and roadway difficulties.

## **Checklists**

A checklist is shorter than the detailed questionnaire but covers similar areas (see the sample one provided in Appendix C). A checklist can alert managers to the major categories of risk (general liability, employee liability, property loss, contractual loss, and business interruption) and associated assets and operational procedures that may be affected. The sample checklist in Appendix C is organized by risk category, within which specific transit assets, activities, and items are listed. Respondents check off those which are applicable and complete the information requested.



## **Claims History**

There is no better way to predict the future than to look at a record of the past. A claims history is a ready-made data base for identifying risks particular to a transit system. In addition to pointing out areas of risk, a review of past claims will indicate the frequency and severity of specific losses. Claims management is addressed in Section VI of this manual.

Although a claims history is useful, risk managers must be aware that new exposures develop everyday as the environment and services change. Exposures can change with any of the following:

- . new services or new routes
- . construction on roadways
- . roadway hazards
- . development on adjacent property
- . new equipment
- . new building construction
- . laws and regulations
- . court decisions
- . new contracts

## **Passenger Complaints/Suggestions**

Next to employees, passengers have the greatest exposure to the daily operations of transit systems. Passenger complaints and suggestions regarding safety issues or problems should be passed on to the risk manager's office. Customer service representatives and other employees may receive such complaints; all must understand the importance and proper procedures for reporting passenger-identified hazards.

## **Other Documents**

A review of in-house generated documents can provide information that supplements that gathered by the procedures outlined above. Among these are legal documents such as contracts, purchase orders, leases, and other agreements. They may specify the assumption or transfer of liability between the transit system and the contractor, service provider, or tenant. Such documents include hold harmless

agreements and indemnification agreements, along with specifications for required insurance coverage.

Financial documents including budgets, profit/loss statements, balance sheets, and other financial records, document the flow of funds into and out of the organization. These records are useful in identifying risks that may affect revenue and the transit system's assets. All records of the original cost of physical and personal property owned by the organization should be examined. The risk manager should be notified of new purchases and sales of property so that adequate protection can be ensured.

Minutes of board or managerial meetings should be reviewed so the risk manager is aware of plans for the purchase or sale of major assets, expansion of activities, new operations or new construction projects.

Departmental manuals and standard operating procedures may contain statements that may unintentionally create liabilities, particularly in the area of employee relations. These documents should be examined to identify outdated and/or inappropriate policies.

## **Flowcharts**

Flowcharts enable an organization to illustrate, step-by-step, the system of relationships behind its operations and to predict the consequences of serious interruptions in that system. Flowcharts are useful in identifying potential problems with products (e.g., restrictions on fuel availability) or operations (e.g., equipment breakdowns) that may lead to business interruption, loss of income, or extra expense exposures. For example, if a major parts supplier should experience a fire at its warehouse, how would it affect the transit system's ability to continue at current service levels? Or, if a major building should burn down, what vital services would be interrupted? What would be the extra expense of reestablishing these functions at some alternative location? Flowcharts can be useful in such analyses.

## **Outside Experts**

A risk management consultant can perform program audits to identify areas of risk in addition to suggesting appropriate financing mechanisms. These services can be expensive, so it is important to clearly state the extent of services and level of detail expected for the consultant's fee.

Another option is to hire specialized consultants to supplement in-house staff on particular technical matters. These consultants include safety engineers, security specialists, and fire prevention experts. Safety inspection services are also available from many insurance agents and brokers.

## **RISK EVALUATION**

The risk exposures in this diverse array should not all be treated in the same manner. A procedure is needed to select the most appropriate risk treatment option for each area. The key criterion in this selection process is loss potential as measured by frequency of occurrence and severity of damage.

### **Loss Potential**

Loss potential includes both direct and indirect costs resulting from an incident. Direct costs are tangible and not difficult to track and accumulate: specific dollar amounts paid to settle damage and/or injury claims are readily available. Indirect costs, however, can be easily overlooked. Listed below are some hypothetical cost impacts of an accident involving a bus and its operator. The list would be even longer if passengers and other third parties were involved.<sup>1</sup>

#### **. Injuries**

- first aid
- ambulance/emergency services
- supervisor/management time involved
- investigation, follow-up and processing of reports

#### **. Wage losses**

- idle time of interrupted workers
- time spent clearing the area of the accident
- time spent repairing damaged bus and other facilities/ equipment involved
- time lost by injured driver

#### **. Service losses**

- reduction in service on the street
- temporary loss of experienced driver
- lower performance of newer replacement driver

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<sup>1</sup>Urban Mass Transportation Administration, Wisconsin Bus Safety Manual, prepared by National Transit Services and David L. Ellis Agency, September 1985, pp. 1-2.

- loss of vehicle while being repaired
- . Associated costs
  - loss of revenue due to reduced service
  - temporary replacement of damaged bus
  - extra-board worker to replace injured worker
  - workers' compensation costs
  - costs of providing protection/security at accident site
  - cost to operate claims/legal/accident review functions
- . Intangible costs
  - lower employee morale
  - unfavorable public relations
  - possibility of increased problems with the labor union

As mentioned above, loss potential is assessed in terms of frequency and severity. This approach allows diverse risk areas to be compared and ranked on the importance to the organization's operations.

### **Loss Frequency**

Loss frequency measures how many times a loss is expected to occur in a certain time frame. The best source of this information is a transit system's loss history. Industry experience accumulated by state insurance departments, industry associations (e.g., the American Public Transit Association), insurance companies, or other groups can also be used in analyzing loss frequency. After examining this information, the chance of a particular type of loss can be categorized as low or high.

### **Loss Severity**

Severity is gauged by the dollar amount assigned to a loss, including both property and liability losses. In analyzing severity, the maximum probable loss and the maximum possible loss from an occurrence should be considered. Probable loss is an assessment of the dollar amount of loss that will probably result from an event. Possible loss is the worst-case scenario. All costs associated with a loss must



be included: physical damage loss, loss of income, indirect property losses, extra expenses, and third party and employee liability expenses. Loss control measures such as alarm and sprinkler systems may reduce exposures; this should be factored into the calculations. On the other hand, for certain catastrophic liability exposures the maximum possible loss should be estimated as unlimited.

Assessing the severity of losses is more difficult than predicting the frequency. The severity of property losses can be determined through the knowledge of the value of the system's assets that is acquired through the risk identification process. Assessing the severity of liability exposure is essentially subjective and speculative. These estimates can be more objectively grounded if they take into account recent court cases, local claims history, jury awards, settlements, costs of defense, and similar suits against other transit agencies. Legal counsel in this area should be sought.

A sample risk exposure checklist is included as Appendix D.

### **Loss Potential Rating Matrix**

After all risks have been identified and evaluated, the next step is to classify them. A particular risk can be classified as shown on Exhibit II.1, into one of the following four categories:

- . Type A: Low-severity, low-frequency losses. These are such things as minor theft, vandalism, routine injuries, and minor building damage.
- . Type B: Low-severity, high-frequency exposures. These include bus and auto accidents, workers' compensation claims, and some general liability exposures.
- . Type C: Low-frequency, high-severity exposures. These include boiler and machinery, property loss, large liability suits against the organization, data processing losses, permanent injuries, or major theft.
- . Type D: High-frequency, high-severity losses. These types of losses are not common, but can involve property loss and some general liability exposures.

Once the risks are classified, the most effective method of treatment can be determined. Risk treatment options include loss control, retention of loss financing, insurance, and risk transfer. These options and their relationships to loss potential exposures are discussed in subsequent sections of this manual.

## EXHIBIT II.1

### LOSS POTENTIAL RATING MATRIX

		<u>Frequency</u>	
		Low	High
<u>Severity</u>	Low	<div>Type A</div> <div>Low Severity Low Frequency</div>	<div>Type B</div> <div>Low Severity High Frequency</div>
	High	<div>Type C</div> <div>High Severity Low Frequency</div>	<div>Type D</div> <div>High Severity High Frequency</div>

- . Quadrant A: Low-severity, low-frequency losses are included in quadrant A. Such things as minor theft, vandalism, routine injuries, and minor building damage fall into this category.
- . Quadrant B: Low-severity, high frequency exposures are in quadrant B. These include bus and auto accidents, workers' compensation claims, and some general liability exposures.
- . Quadrant C: Low-frequency, high severity exposures fall in quadrant C. These include boiler and machinery, property loss, large liability suits against the organization, data processing losses, permanent injuries, or major theft.
- . Quadrant D: High-frequency, high severity losses are included in quadrant D. These types of losses are not common, but can involve property loss and some general liability exposures.





### III. LOSS CONTROL METHODS

There are numerous options for managing identified hazards. They can be divided into two categories of risk treatment techniques:

- . Loss control - minimizing loss through preventive and/or reactive measures.
- . Risk financing - funding loss payments through retaining or transferring financial responsibility.

This Chapter discusses loss control methods; risk financing is discussed in Chapter IV.

Loss control techniques can reduce the frequency and/or severity of incidents, minimizing financial damage, whether or not a loss is insured. An effective loss control program is the best long term method of reducing loss expenditures. Such a program requires a significant initial investment of time and money, but when planned, implemented, and monitored properly the pay off is considerable.

Avoiding certain risky activities is one way to minimize loss, although a transit system, which must carry out its primary function of transporting passengers in a nondiscriminatory manner, must take certain risks. However, some non-essential services and operations, should be scrutinized with special care. For example, it might be prudent to refrain from operating special services to activities likely to attract unruly crowds. On balance, the additional revenue may not be worth the risks of damage to vehicles or injury to passengers. Risks can be avoided during normal operations: for example, vehicles can be routed away from steep and potentially icy roads. It is important to note, however, that most loss control actions can only reduce, not eliminate risk.

As noted, loss control techniques are preventive or reactive. Loss prevention is geared toward reducing the chance of an incident or accident, thus reducing the frequency of losses. Proper vehicle maintenance and inspections, operator training and safe equipment design are all examples of loss prevention measures. Reactive measures dictate proper responses to incidents or accidents, with the objective of minimizing its effect. Examples are first aid training, evacuation procedures, and alarm systems.

#### APPLICATIONS OF LOSS CONTROL TECHNIQUES

Transit passengers may be injured at any time during travel. Transit employees face risks similar to those faced by employees in other transportation industries. In the same way, transit system property is exposed to common hazards: fire, theft, and accidental damage. A comprehensive systemwide approach to loss control is therefore warranted.

Loss control measures are feasible for nearly every aspect of a transit system's operation. This section describes how transit industry organizations can set up and administer organization-wide loss control programs, and what specific actions can be undertaken to reduce loss expenditures. (Safety measures particular to rail transit are not addressed.<sup>1</sup>) The discussion is organized into the following areas:

- . organizational safety programs
- . vehicle safety programs
- . employee safety programs
- . service factor considerations
- . physical property protection
- . professional liability prevention
- . passenger safety programs

Upon first reading it may appear that a loss control program requires substantial work since it encompasses many activities and requires new responsibilities of all departments in a transit organization. Upon further consideration the reader will see that many of the activities described are already being performed, although probably not as part of a risk management program. As stated in Chapter I, the purpose of this manual is to provide a framework for organizing and/or modifying ongoing activities and for phasing-in additional risk management projects. An incremental approach is suggested: a six month to one year implementation period can be expected. (See Chapter I: Introduction to Risk Management.)

## **Organizational Safety Programs**

A transit system's mission is to move people safely in an efficient and cost effective manner. To serve this purpose, all units in a transit system must make safety a primary objective, and integrate safety measures into their ongoing functions. The management of a transit organization is responsible for overseeing the system's safety program and for ensuring that all safety-related responsibilities within the organization are carried out effectively. This management process is termed system safety. Formalizing and recording this process results in a system safety program.

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<sup>1</sup>For information on rail system safety consult: A Manual for the Development of Rail Transit System Safety Program Plans, Rail Safety Review Board of the American Public Transit Association, Washington, D.C., October 1986.



Differences in fleet size and modes operated, combined with the wide variety of operational and environmental characteristics found in American transit systems, require that every system safety program be tailored to its organization's needs. Although no particular safety program will be applicable to all properties, a recommended general approach to formulating and implementing a successful program is presented in this report. Below we describe the participants and responsibilities in a transit safety program; the transit system's activities; and methods for distributing information to the public.

## **Participants and Responsibilities**

Who participates, with what responsibilities defines the organizational structure of a system safety program. Although loss control is the responsibility of everyone in the organization, the ultimate burden rests with the Board of Directors and its agent, the General Manager. Top management should provide strong leadership and visible support for loss control as a management objective.

General Manager. A formal, written safety policy, issued by the General Manager's Office, is an effective method for establishing safety as a goal and for demonstrating a commitment to that goal. The statement's primary purpose is to effectively communicate to all employees that management is committed to safety and that achievement of safety goals will be an important measure of job performance. The policy should include overall guidelines for implementing a loss control program. Beyond that, it can be very brief and general or more lengthy and specific in outlining safety practices, administrative responsibilities, coordination and reporting requirements, and target performance levels. The document should be issued to each employee annually and to new employees as hired. An example of a general management policy statement is presented as Exhibit III.1.

Risk Manager. "Risk Manager" and "Safety Coordinator" are often analogous titles at transit systems. While system safety is one of the many responsibilities of a transit system risk manager, the scope of other responsibilities depends on the size and structure of the organization. Risk management touches on many areas, including finance, personnel, law, purchasing, and administration.

In larger transit systems, there is a trend toward consolidating the various risk management functions under a single risk manager. For example, the risk manager may have responsibility for directing a comprehensive program of property and liability insurance, risk financing (e.g. self-insurance), workers' compensation, employee benefits, claims management, and disaster planning, in addition to overseeing loss prevention and loss control. Often, the risk manager is supported by full-time staff, such as a safety or loss control coordinator, employee benefits assistance, claims analyst, industrial hygienist or similar positions.

Smaller transit systems often do not designate a full-time risk manager. The various risk management functions are placed in different departments. How an agency structures risk management depends on the organization's needs. If risk management responsibilities are separated, it is important to maintain some method of coordination among departments on issues of risk.

## EXHIBIT III.1

### SYSTEM SAFETY POSITION STATEMENT FINAL DRAFT BAY AREA RAPID TRANSIT DISTRICT

The mission of the Bay Area Rapid Transit District is to plan, develop and operate public transportation and related services for the San Francisco Bay area. Transit services must be safe, reliable, efficient and cost-effective. Safety is the major consideration in all operations including planning, design, construction, testing and maintenance of the rail transit system. To meet these goals, three safety objectives are established.

1. To avoid loss of life, reduce injury and minimize damage or loss of property.
2. To instill an awareness of safety in all BART employees and contractor personnel.
3. To provide for the identification and elimination or control of hazards through a systematic approach of auditing and analyzing the operational system and the work environment.

The Safety Department is directed and empowered to develop, implement and administer a comprehensive and coordinated System Safety Program. The program will emphasize preventive activities and responsibilities of each department in an effort to identify, control and resolve hazards during design, development and operational phases of transit service. In addition, where it is determined that unsafe conditions or practices exist, the Department Manager of Safety has the authority to order such conditions corrected or practices halted. This includes the interruption of revenue service, if conditions warrant.

Each department shall support the System Safety Program and shall cooperate in the achievement of the established goals and objectives.

Accountability for safety rests with each employee, supervisor and manager. All are responsible for meeting the safety requirements inherent to their position. Individual employees must comply with the safety rules and procedures applicable to their work duties. Supervisors and managers must enforce safety standards applicable to their departments.

Further, the Safety Department will consult with all departments in the achievement of established safety goals and objectives. It is the duty of each BART employee to cooperate with the Safety Department and to provide that department with any information requested to aid in any investigation, inspection and/or audit.



**Safety Coordinator.** Day-to-day responsibility for the organization's safety and loss control program generally rests with the safety coordinator. In some cases, however, the safety coordinator may be assigned other risk management responsibilities, including property and liability insurance and claims administration. In medium to large transit systems, the safety coordinator usually reports to the risk manager. In smaller systems, or those lacking a centralized, comprehensive risk management program, the person responsible for safety would likely report to the General Manager or to a department director, such as the director of personnel, administration, or training.

The safety coordinator is accountable for the operation of the transit system's safety program, and must maintain a cooperative working relationship with all departments to identify, assess, and control safety issues. To carry out these responsibilities the safety coordinator should be entrusted with broad based authority to direct the safety program and be able to request and obtain data, perform analyses, and inspect and observe departmental operations.

**Safety Committees.** To generate a continuing interest in safety throughout entire organizations, insurance companies and transit systems are supporting the use of formal safety committees. Representatives of every department, both management and employees, sit on the committee, as do safety experts from outside the transit system. Its responsibilities include increasing safety awareness throughout the organization, serving as a channel for safety-related concerns of employees, and problem solving. Regular meetings of such a committee should be scheduled not less than monthly.

**Accident Review Committee.** An accident review committee has a narrow focus: reviewing all accidents involving transit system employees. Membership is typically smaller than that of the safety committee and should consist of a representative(s) from management, labor and an independent safety expert. This committee formally reviews each accident and classifies it as "preventable" or "non-preventable." The National Safety Council publishes criteria for making this determination:

- . In general, preventable accidents are those in which employees failed to do everything they could reasonably have done to avoid it.
- . Non-preventable accidents are those in which employees for example, did do everything they could to avoid. For drivers, this includes driving defensively.

The committee may be empowered to recommend disciplinary actions or to review such actions when taken by management.

### **Transit System Activities**

Activities of a transit system safety program are shared by the participants identified above. The numerous specific tasks can be grouped into the following major categories:

- . Coordination among transit system departments and with the safety coordinator's office. Inter-departmental coordination is needed to ensure a comprehensive approach to loss control planning and implementation. Specific tasks are assistance in developing and updating departmental safety objectives; preparing safe operating procedures, providing formal safety training, developing inspection checklists, conducting inspections, and conducting personnel and program reviews. These tasks should be the primary responsibility of the safety coordinator and staff and the safety committee, supported by personnel from other departments who have been delegated safety responsibilities.
- . Monitoring the effectiveness of loss control measures. Safety performance data should be collected from all departments and analyzed, and loss incidents and reporting findings should be investigated. Types of data to be collected include losses by cause, injury claims, damage costs, and remedial actions taken. Another task is providing feedback information on the success of loss control measures in reducing the frequency and severity of incidents; this may involve establishing standards and measuring performance against them. The safety coordinator and the accident review committee have primary responsibility for this task, and other departments provide information.
- . Coordination with organizations outside the transit organization. It is important for a transit system to maintain good contacts with two types of organizations: 1) regulatory agencies with oversight powers and responsibilities; and 2) local emergency support organizations. The safety program at a transit authority should meet all requirements established by Federal, state, and local governmental agencies. These agencies should be identified, contacts established, and regulatory information kept up to date. Agreements with local police departments, hospitals, fire departments, and rescue squads aid timely communication and coordination at the time of a serious emergency. The safety coordinator is responsible for establishing and maintaining these relationships.
- . Communication and promotion of a loss prevention program. Safety/loss concerns should be communicated to employees and the public should be educated about safe use of the transit system. Within the organization, communication channels are needed to maintain interest in safety, to distribute new information, and to receive input from employees. Techniques include safety-specific publications, handout flyers, articles in the in-house newsletter, prominently displayed bulletin boards, and safety meetings. Suggested content matter includes safety tips; progress toward achieving safety objectives; e.g., number of days without serious injury or loss; comparisons of this month's or year's safety performance with the last; winner of safety awards; promotion of new safety activities; employee suggestions for safety improvements; and messages from management.



- . Keeping abreast of new developments in safety. Technological advancements in safety devices and materials don't prevent loss unless the information about them reaches the right people. At a transit system, the right people might be found in procurement, engineering, operations, maintenance, or training. The safety coordinator should act as a clearinghouse, gathering information about, for example, advancements in personal protective gear, less flammable materials for seating, vehicle failsafe components, or new training approaches. The information should then be communicated to the individual(s) responsible for the function affected.<sup>1</sup>
- . Preparation of documents. To be taken seriously by management and employees, safety program materials must be well documented and be organized for ready access. Sample items include safety program goals, objectives, policies, and designated responsibilities; safety procedures manuals; training manuals; inspection checklists and reports; and measurement methods and performance analyses. The safety coordinator's office should assume primary responsibility for preparing and assembling materials, acquiring appropriate reviews and approvals, distributing materials, and maintaining an organized and complete reference source. Appropriate departments should provide support as needed.

## **Public Information**

The riding public needs frequent reminders of the importance of following recommended travel procedures. Means of communication include flyers handed out aboard vehicles and at information centers, message boards posted on the interior of the vehicles, a bureau of speakers available to address community and school

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<sup>1</sup>The following organizations are resources for public sector oriented safety publications and/or seminars:

- . American Society of Safety Engineers  
1800 East Oakton  
Des Plaines, IL 60018  
(312) 692- 4121
- . National Safety Council  
444 North Michigan Avenue  
Chicago, IL 60611  
(312) 527-4800
- . Public Risk Management Association (PRIMA)  
1120 G Street, NW  
Suite 400  
Washington, DC 20005  
(202) 626- 4650)

groups, and possibly radio and television public service announcements. The message should be "dos and don'ts" for safe use of the transit service.

Primary responsibility for the communication function rests with the safety coordinator's office, with strong support from marketing and public relations department. The safety committee should be invited to provide additional input.

These activities are the basic components of an organizational safety program. The framework described, emphasizing safety as a key management objective, will support development and implementation of a wide range of loss control measures. The remainder of this section presents specific recommendations to safeguard passengers, employees, and property from preventable hazards.

## **Vehicle Safety Program**

The majority of passenger loss incidents occur on the transit vehicle. Whenever a vehicle or its equipment malfunctions or is designed improperly, a hazardous situation is created. A formal, extensive vehicle and equipment safety program can thus be justified. At a minimum, such a program should include the following: vehicle design, preventive maintenance and inspection practices, and record keeping.<sup>1</sup>

### **Vehicle Design**

Taking vehicle design into consideration when procuring new vehicles can enhance accident prevention and minimize accident consequences. Similar design criteria can also be part of a bus rehabilitation program or simply an independent safety improvement plan. Retrofitting the existing fleet with appropriate updated safety equipment offers immediate safety improvements. While a discussion of safety engineering, design review, and acceptance testing issues require a technical expertise beyond the scope of this manual, some basic considerations for vehicle size and equipment specifications are presented.

Vehicle size. Properly matching the size of a transit vehicle to ridership levels can reduce the risks and consequences of accidents. An overcrowded vehicle increases the possibility of passenger falls. Large vehicles are at greater risk simply because they are larger; large vehicles also require greater handling skills to operate safely--turning corners in an articulated bus, for example, is more difficult than in a standard coach. Passenger loading requirements should be ascertained from maximum load counts, to ensure safe ratios of seated to standing passengers. Operators should also be instructed to report excessive overloads.

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<sup>1</sup>Much of the discussion regarding vehicle safety programs is based on material found in the Wisconsin Bus Safety Manual, prepared by National Transit Services in association with The David L. Ellis Agency for the Bureau of Transit, Wisconsin Department of Transportation, September 1985, pp. 29-33.



Vehicle Specifications. Safety equipment specifications should be carefully written and researched if a transit system is to procure crashworthy and fire resistant vehicles. Transit vehicles are generally safer now than in the past, but transit systems should require manufacturers to supply the latest crash-test data on their vehicles. Required safety should be built into all components, including brakes, emergency exits, radial tires, kneeling and lift equipment, and seat and aisle design. Important safety equipment includes two-way radios, emergency alarm systems, fire extinguishers, push-out windows, and first aid kits. Other recommendations follow.

- . Wide angle convex mirrors attached to standard mirror posts increase the operators' field of vision as much as 200 percent and are especially important on the right side for turning and observing passenger movements.
- . Seat belts for drivers protect the operator during an accident; their use should be mandatory. Comfortable and fully adjustable driver's seats can reduce driver injury.
- . Passenger areas can be made safer by increasing padding and by removing sharp surface areas. Flooring materials should be skidproof, as the most frequently reported passenger accidents are falls.
- . Energy absorbing bumpers decrease the shock of impact and extent of damages.
- . Exterior side-mounted turn indicators signal lane changes to adjacent traffic. Rear mounted strips of red, yellow, and green lights indicate to other traffic whether the bus is stopped, decelerating, or accelerating; this may prevent rear-end collisions. Both those measures are particularly helpful in congested traffic.

### **Preventive Maintenance and Inspection**

Preventive maintenance and inspection practices are already strongly safety oriented at most transit systems. Possible improvements are upgrading and formalizing procedures and extending loss control measures to new areas. The major components of a well-designed program are briefly described below.

Daily maintenance responsibilities include maintaining proper fuel tank levels, checking other fluid levels and mixes, cleaning the interior and exterior of vehicles, replacing burned-out bulbs, regularly inspecting the vehicle body for unreported damages, and maintaining operational records and procedures. Operators are responsible for the safety of their vehicle to the extent that they should communicate known defects to the proper maintenance personnel. Pre-trip and/or post-trip inspection checklists have proven effective in this procedure. See Exhibit III.2 for a sample checklist. An operator's inspection report allows maintenance personnel to key in on items in need of immediate repair such as lights, mirrors, brakes, tires, wiring, and passenger area equipment such as torn seats, broken

## EXHIBIT III.2

### PRE-TRIP/POST TRIP INSPECTION CHECKLIST

Check for Proper Condition and Operation.	Mechanic Comment
--	------------------

_____ Turn Signals/4-Way Flasher	
_____ Headlights (Hi/Low)	
_____ Marker Lights	
_____ Brake/Tail/Back-Up Lights	
_____ Step Lights/Exit Light	
_____ Interior Lights	
_____ Destination Sign/Lights	
_____ Horn	
_____ Dash Gauges/Warning Lights/Switches	
_____ Speedometer/Tachometer	

_____ Transfer Cutter	
_____ Farebox/Vault/Light	
_____ Fire Extinguisher/First Aid Kit/A1E	
_____ Doors	
_____ Windows	
_____ Steps/Aisle	
_____ Seats/Crabralla	
_____ Passenger Signal	
_____ Mirrors	
_____ Brakes (test before leaving yard)	
_____ Heater/Defroster/Fans	
_____ Air Conditioning	
_____ Windshield Wipers/Washer	
_____ Transmission/Drive Train	
_____ Steering	
_____ Service/Parking/Interlock-Brakes	
_____ Tires/Wheels	
_____ Suspension	
_____ Engines Power/Leaks	
_____ Body Damage	
_____ Other (explain)	

Bus # \_\_\_\_\_ Vault # \_\_\_\_\_ Mileage \_\_\_\_\_ Hrs. \_\_\_\_\_

Date \_\_\_\_\_ Drivers \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

windows, or ripped flooring. The checklist serves as a reminder of all the components needing inspection.

Periodic inspection and interval maintenance should be performed on other components of the vehicle that are not as easily visible. The objective of periodic inspections is to detect and repair damaged parts before these parts fail or require major repair. Inspection items in this category include suspension elements, drive train, brakes, leaks, belts, electrical connections, corrosion and body damage, and tire wear.

Interval maintenance is performed in anticipation of wear, misalignment or deterioration before vehicle failure. Components are either time sensitive, meaning their rate of wear is based on age regardless of miles operated, or mileage sensitive, meaning they wear out as the bus is driven. The intervals at which components should be replaced are determined by vehicle type, component quality, local operating conditions, and manufacturer recommendations. An interval maintenance program should include, at a minimum, lubricating oils and filters, alignment, tires, steering components, engine, transmission, and brakes. An example from a preventive maintenance and safety inspection guide is presented as Exhibit III.3.

Breakdown maintenance occurs after a failure makes it unsafe to continue to operate a vehicle. Examples of in-service breakdowns include flat tires, engine failures, brake trouble, and line ruptures. The safety of passengers and operators is the primary concern. Operators should be knowledgeable in the appropriate procedures that will ensure the safe evacuation of passengers from the bus, safe passenger waiting locations for the replacement vehicle or repair, and safe boarding procedures.

### **Recordkeeping**

Recordkeeping on vehicle maintenance and inspection activities is critical to maintaining a safe fleet. Vehicle records, are the primary means of communication among operators, maintenance personnel, and inspectors or supervisors, especially at medium and large properties. Vehicle documents should record reported defects, corrective actions taken, follow-up inspections, and personnel performing the work. Recordkeeping provides a paper trail that maintains accountability among personnel responsible for operating and repairing vehicles.

### **Employee Safety Program**

The transit industry is labor intensive: an average of 60 to 65 percent of its financial resources are expended on its labor force. Therefore, a transit system's safety record will be affected directly by the actions of its staff and a significant portion of its risk management program should be people oriented. Because vehicle operators shoulder much of the risk, they are often the focus of safety programs. However, many of the loss control measures described here can be applied to other groups of transit system personnel with only minor modifications. An employee



### EXHIBIT III.3

## SOUTH COAST AREA TRANSIT PREVENTIVE MAINTENANCE & SAFETY INSPECTION GUIDE

#### SOUTH COAST AREA TRANSIT

#### PREVENTIVE MAINTENANCE & SAFETY INSPECTION GUIDE

BUS # \_\_\_\_\_ DATE STARTED \_\_\_\_\_ DATE COMPLETED \_\_\_\_\_

= OK	X = Repairs/Adjustments Required	O = Repairs/Adjustments Completed	D = Deferred
------	----------------------------------	-----------------------------------	--------------

✓ X O

			Steam clean eng. trans, AC, Batt. Compt. Radiator. (A/C Condensor RTS-II)
--	--	--	---

#### COACH INTERIOR:

		Ck air press. build-up 5 min. max. 90 psi to 120 psi; pump down gov. kin in 80-90 psi
		Ck all warning lights; stop, exit door, low air, water, oil, battery, hot eng. hi-low beam, A/C, turn signal, etc.
		Ck all instrument panel controls, mounting brackets, screws, etc.
		Ck parking brake operation.
		Ck rear door brake and accelerator interlock.
		Ck driver's seat, belts.
		Ck radio operations (Ch 1 & 2), mounting bracket cradle, etc.
		Ck windshield wiper/washer operation.
		Ck horn operation.
		Ck windshield defroster operation.
		Ck stanchions, grab rail anchors/mounting brackets, screws.
		Ck seat anchors.
		Ck windows, doors and hatches.
		Ck emergency exits.
		Ck emergency equipt; flare kit, fire extinguisher, door hammers.
		Ck sensitive edge switches.
		Ck entrance/exit door stepwell lights.
		Ck passenger stop requested tapes.
		Ck wheelchair lift parking brake, lock and safety belts.
		Ck headlights, hi-low beam, turn signals, running/clearance, stop & emergency lights.
		Ck tire condition & inflation. Min. tread depth Frt. 4/32, R. 3/32: Min. air press. front 100 psi, rear 90 psi.
		Ck door hinges, gas cylinders, latches, etc.

#### UNDERCARRIAGE:

		Ck for exhaust leaks and noises.
		Ck engine oil level. Add oil as needed.
		Ck steering system linkages, rods, shafts, tie-rod ends, cylinders, gearboxes, U-joints, slip-joints, bushings, etc.
		Ck all hose lines for cracks, breaks and leaks.
		Ck brake chambers for loose mountings, bolts and leaks.
		Ck slack adjusters operation and proper brake chamber push rod travel. Adj. to Mfg. spec.
		Ck brake lining wear. Replace if any portion of lining is at or below wear line.

#### PRE-INSPECTION ROAD TEST:

21		Ck operation of all instruments and gauges.
22		Ck trans. operation; hard up/down shifts. Ck for excessive exhaust smoke.
23		Ck bus acceleration. Ck steering action/wheel play.
24		Ck brakes for grabbing, pulling, soft, noisy.
25		Ck coach for unusual noises, vibrations, rattles, etc.
26		On return to yard, ck for fluid leaks.



safety program should be involved in employee selection, employee training, and on-going personnel practices, each of which is discussed below.<sup>1</sup>

### **Employee Selection**

Employee selection is the first opportunity a transit system has of acquiring safety-minded employees. Employee recruitment and selection is a complex process that this document cannot address in full; only the safety aspects of this process are highlighted.

To ensure employees are properly matched to job categories, written, detailed job descriptions and qualifications statements should be available to recruiters and applicants and should include information such as job responsibilities; anticipated work hours; license or certificate requirements; experience necessary, if any; physical capabilities required; and measures of performance. Examples of this employment information used by South Coast Area Transit in California are shown as Exhibits III.4 through III.7.

To minimize the risk of vehicular accidents and to improve and maintain the quality of drivers, applicants for positions which require the operation of transit system vehicles as an essential part of their duties, (bus operators, bus mechanics, cleaners, service station attendants, supervisors, etc.) should meet the following safety criteria:

- . Pass a physical examination by an approved physician knowledgeable of the specific job requirements and qualifications. Any physical job requirements must meet standards of validity, i.e., proof that the criteria are job related, and associated tests must measure ability accurately.
- . Have a safe driving record as exemplified, for example, by no more than 3 moving violations in the last 24 consecutive months and no driving while intoxicated (DWI) convictions in the last 60 months. This information can be obtained from the State Department of Transportation.
- . Maintain a valid drivers' license appropriate to the class of vehicle.

Employees handling non-bus equipment should have appropriate licenses or certificates. In addition, operator applicants should meet more stringent physical requirements, such as visual acuity standards (for example, peripheral vision and sight corrected to at least 20/40), hearing standards, and freedom from any medical conditions that could interfere with their ability to perform the normal tasks associated with operating a bus.

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<sup>1</sup>Much of the discussion regarding an employee safety program is based on material found in the Wisconsin Bus Safety Manual, prepared by National Transit Services in association with The David L. Ellis Agency for the Bureau of Transit, Wisconsin Department of Transportation, September 1985, pp. 11- 29.

## EXHIBIT III.4

# SCAT INFORMATION FOR JOB APPLICANTS & EMPLOYMENT OPPORTUNITY BULLETIN

The Personnel Department of South Coast Area Transit has two employment functions: Management and Standard positions (for bus operator, mechanical and clerical jobs). This leaflet refers only to the Standard Employment function.

South Coast Area Transit is the publicly owned bus system which serves the western portion of Ventura County committed to hiring the most qualified persons for all of its jobs. Our recruitment and selection procedures are similar to those used by employers in the public sector. The selection process is a comparative and competitive one, so it is important that you present yourself in the most positive manner in all stages of the process. The following information will be of use to you.

### RECRUITMENT

All openings are posted in the Reception Area in the Administrative Offices at 301 E. Third Street, Oxnard, California. Notices of vacancies may be mailed to various public agencies, and an advertisement may be placed in selected newspapers.

### HOW TO APPLY

If you wish to be considered for any current job vacancy, you must submit a completed South Coast Area Transit application to SCAT, 301 E. Third Street, Oxnard, California, 93030 by 3:00 p.m. on the closing date on the employment announcement. All applications must be completed by the applicant in the SCAT Administrative Offices, unless waived by SCAT. No applications will be mailed or taken from the receptionist area (unless waived by SCAT). When SCAT does waive the mailing of applications, SCAT does not make allowances for either United States or company mail delays. It is your responsibility to be sure that your application arrives in time. A resume may be attached (as indicated on the application), but the application form itself must be completed. No applications will be accepted if incomplete as to information requested and without signature on application and on each confidential inquiry. No confidential inquiry/application will be processed without the complete information of present/past employer. (This includes street address).

Applicants with out-of-state drivers license must provide a copy of their recent motor vehicle record from their respective State Department of Motor Vehicles. If you are applying for more than one position, you must submit a completed application for each position.

### SELECTION PROCESS

After the close of the filing period, all applications are reviewed and evaluated. Since it is impractical to test and interview all qualified applicants, SCAT will identify those applicants who appear to best meet SCAT's needs. Those people will be invited by mail to continue in the selection process. Those not invited will also be notified by mail. The selection device for a given vacancy may include a written examination; or a technical oral exercise and interview; a performance test or an appraisal interview; or any combination of these. (Appraisal interviews are conducted by a panel of two or three people.) Weights of the various devices (e.g., 50%, Pass/Fail, ranked or unweighted) may also be utilized.

### CERTIFICATION AND FINAL SELECTION

When all phases of the selection process are completed the Personnel Department will certify an eligibility list based on overall scores. After SCAT has made its selection, those candidates not selected will be notified by mail and will be told of their ranking on the eligibility list, if one is being established. The existence of an eligibility list means that if other vacancies open within six months, they will be filled from those applicants who have successfully completed the last selection process.

### HIRING

South Coast Area Transit will extend an offer of employment which is contingent upon (a) your passing a physical examination conducted by SCAT's physician and (b) all necessary paperwork being completed. SCAT will arrange to have you scheduled for the physical exam as soon as possible, and will notify you as soon as the final clearance for hiring is received (usually within one week from the date of the physical). You should not give notice to your current employer until you have been so notified.

SCAT has a six-step salary for most positions. New employees normally are hired at A-Step, and after six months of satisfactory performance they move to the B-Step (based on full-time status). These six months are the probationary period. There will be an increase to C-Step after six months of satisfactory performance in B-Step. Thereafter, there will be annual increases to Steps D, E and F based upon satisfactory performance evaluations.

### EXHIBIT III.5

## SCAT INFORMATION FOR JOB APPLICANTS & EMPLOYMENT OPPORTUNITY BULLETIN

#### BUS OPERATOR

**SALARY RANGE:** \$7.64 - \$10.72 PER/HOUR      **NO BENEFITS**

**THE POSITION:** A BUS OPERATOR IS RESPONSIBLE FOR THE SAFE OPERATION OF A CITY BUS ON AN ASSIGNED ROUTE AND ON SCHEDULE. IT IS NECESSARY FOR THE OPERATOR TO MAINTAIN A PLEASANT, COURTEOUS AND HELPFUL ATTITUDE TOWARD THE PUBLIC AT ALL TIMES. MUST DRIVE WITH DUE REGARD TO THE SAFETY AND COMFORT OF PASSENGERS. ANSWER QUESTIONS REGARDING ROUTES AND TIME SCHEDULES OF THE SCAT SYSTEM. REPORTS EQUIPMENT DEFICIENCIES USING PRESCRIBED FORMS AND PROCEDURES. COLLECT FARES AND MAKE CHANGE. PERFORMS OTHER RELATED DUTIES AS ASSIGNED.

**QUALIFICATIONS:** A VALID OR ABILITY TO OBTAIN A CLASS 2 CALIFORNIA DRIVERS LICENSE IS REQUIRED. CONSIDERABLE SKILL IN THE OPERATION OF MOTOR VEHICLES. KNOWLEDGE OF CALIFORNIA DEPARTMENT OF MOTOR VEHICLES RULES AND REGULATIONS GOVERNING OPERATIONS OF PUBLIC PASSENGER CARRYING VEHICLES. ABILITY TO ESTABLISH AND MAINTAIN COURTEOUS, EFFECTIVE PUBLIC RELATIONS AND TO WORK HARMONIOUSLY WITH OTHERS. ABILITY TO PREPARE CLEAR AND LEGIBLE REPORTS AND TO PERFORM ARITHMETIC CALCULATIONS NECESSARY IN HANDLING MONEY. GRADUATION FROM HIGH SCHOOL OR GED AND A MINIMUM OF THREE YEARS SAFE DRIVING RECORD.

**SELECTION PROCESS:** MOST QUALIFIED PERSONS WILL BE NOTIFIED OF WRITTEN EXAM. THOSE PERSONS WHO PASS THE WRITTEN EXAM (VALIDATED BY THE U.S. DEPT. OF TRANSPORTATION) WILL BE INVITED TO AN ORAL INTERVIEW FOR FURTHER CONSIDERATION.

**FILING DATE:**

APPLICATIONS MUST BE RECEIVED BY  
TUESDAY, JUNE 3, 1986, 3:00 P.M.

**SOUTH COAST AREA TRANSIT**

**AN EQUAL OPPORTUNITY EMPLOYER**

**APPLY AT: 301 E. THIRD STREET, OXNARD, CA 93030**

**(805) 487-4222 • 643-3158 • 647-4241**



## EXHIBIT III.6

### SCAT INFORMATION FOR JOB APPLICANTS & EMPLOYMENT OPPORTUNITY BULLETIN

#### GENERAL INFORMATION AND REQUIREMENTS

##### EMPLOYMENT BENEFITS

PAID VACATIONS \* PAID HOLIDAYS \* RETIREMENT PLAN \*  
CUMULATIVE SICK LEAVE \* GROUP HEALTH INSURANCE \*  
LONGEVITY PAY \* LIFE INSURANCE \* CREDIT UNION \*  
DEFERRED COMPENSATION \* PAID PHYSICAL EXAMINA-  
TION \*

##### MEDICAL EXAMINATION

APPLICANTS WILL BE REQUIRED TO TAKE A MEDICAL  
EXAMINATION PRIOR TO APPOINTMENT TO A REGULAR  
POSITION. FAILURE TO MEET MEDICAL STANDARDS MAY  
RESULT IN TERMINATION OR WITHDRAWAL OF JOB  
APPOINTMENT IF EMPLOYED PRIOR TO COMPLETION OF  
MEDICAL EXAMINATION.

##### APPLICATIONS

ALL APPLICATIONS MUST BE FILLED OUT COMPLETELY  
AND MUST CLEARLY SHOW THAT THE MINIMUM RE-  
QUIREMENTS ARE MET. ALL STATEMENTS MADE ON THE  
APPLICATION ARE SUBJECT TO INVESTIGATION AND  
VERIFICATION. INVALID APPLICATIONS ARE SUBJECT TO  
DISQUALIFICATION.

THE TERM "RECENT" WHEN USED IN THE REQUIRE-  
MENTS REFERS TO TRAINING AND/OR EXPERIENCE OB-  
TAINED WITHIN THE TEN-YEAR PERIOD IMMEDIATELY  
PRIOR TO THE LAST DAY FOR FILING APPLICATIONS.

##### ABOUT SCAT

SOUTH COAST AREA TRANSIT (SCAT) IS THE PUBLICLY  
OWNED BUS COMPANY WHICH SERVES THE WESTERN  
PORTION OF VENTURA COUNTY. SCAT WAS ORGANIZED  
IN 1973 WHEN THE VENTURA CITY TRANSIT LINES AND  
THE OXNARD MUNICIPAL BUS LINES WERE MERGED TO  
PROVIDE BETTER TRANSPORTATION SERVICE BOTH  
WITHIN AND BETWEEN THE CITIES OF OJAI, OXNARD,  
PORT HUENEME, SANTA PAULA, SAN BUENAVENTURA  
AND THE UNINCORPORATED AREAS OF WESTERN VEN-  
TURA COUNTY BETWEEN THESE CITIES.

SCAT OPERATES ON A \$4.7 MILLION BUDGET. THE  
SYSTEM COVERS ABOUT 1 MILLION MILES AND SERVES  
NEARLY 2 MILLION PASSENGERS WITH 40 BUSES.



## EXHIBIT III.7

### SCAT INFORMATION FOR JOB APPLICANTS & EMPLOYMENT OPPORTUNITY BULLETIN

#### BUS OPERATOR

##### DEFINITION

Under the general direction of transit supervisors and/or administrative clerk (transit) and operates a full-size transit bus over an assigned route according to a prescribed schedule.

##### EXAMPLE OF DUTIES AND RESPONSIBILITIES

A bus operator is responsible for the safe operation of a city bus on an assigned route. It is necessary for the operator to maintain a pleasant, courteous and helpful attitude toward the public at all times. Accuracy is required in accounting for the fares received and in making change.

Example of Duties: Drives a bus over an assigned route and on schedule; collects fares, makes change, and keeps records of amounts collected and records passengers carried when required; drives with due regard to the safety and comfort of passengers and to the maintenance of time schedules; answers questions regarding routes and time schedules of the transit system; takes passenger counts and other surveys when required; maintains equipment in clean and sanitary condition at all times; reports equipment deficiencies immediately, using prescribed forms and procedures; performs related work as assigned.

##### DESIRABLE QUALIFICATIONS

Education and Experience: Three years of recent continuous experience in operation of a motor truck or bus and graduation from high school or an equivalent combination of experience and education.

Knowledge and Abilities: Have considerable skill in the operation of motor vehicles; knowledge of California State Public Utilities Commission and Department of Motor Vehicles' rules and regulations governing operations of public passenger carrying vehicles. Ability to establish and maintain courteous, effective public relations and to work harmoniously with others; ability to prepare clear and legible reports and to perform arithmetic calculations necessary in handling money; ability to maintain a clean and neat personal appearance.

License Required: A valid Class 2 California Drivers License is required.

Other key information that should be requested of the applicant pertains to past work experience. Positive attributes include previous good experiences in dealing with public and independent unsupervised work situations. References and reasons for leaving should also be obtained. Previous experience as a bus driver is not necessary as a prequalification. It is often better to train someone with the right skills than to retrain an experienced driver in the safety practices of a particular organization.

A personal interview is recommended, to provide additional information regarding personal appearance, attitude toward the public and the job, and suitability of the applicant's personality to the stresses of the job. It is the responsibility of the personnel department and all other staff involved in the selection process to be sure that all local, state, and Federal employment regulations are enforced in order to avoid any discriminatory employment practice law suits.

### **Employee Training**

Employee training in safety should be taught along with other job skills. It should be made clear that achieving safety will be a measure of good job performance. Training in both preventive measures (e.g., winter driving skills) and reactive (e.g., non-medical emergency techniques) is required. Training should be conducted in the classroom and on the road for all trainees expected to operate a vehicle or in the facility and on the equipment the employee will use. Follow-up supervision and an ongoing safety training program are also essential.

Classroom Training. Training of all new transit system employees should begin with classroom orientation training sessions. This training should include the following safety-related topics, in addition to other procedural and system orientation items.

- . Safety rules and required regular equipment inspections should be stated in clearly worded written documents issued to all new and reassigned employees. Safety rules for bus operators include maximum travel speeds by driving condition, acceptable traffic maneuvers, recommended braking distances, etc.; inspections include pre- and post-trip inspections and reporting. Some systems require that the employee sign a slip that is retained in the personnel file indicating that the employee has read and understood the rules. This procedure can be of assistance in later disagreements. Prohibitions should be clearly stated and acknowledged, e.g., no alcoholic beverages on breaks, no playing of radios on-the-job, and no eating, drinking, or smoking while operating a vehicle.
- . Defensive driving skills instruction is an important component of the employee training program for vehicle operators. Films, video tapes, and slide presentations are available. Contact the following organizations for defensive driving training materials:

- National Safety Council  
444 North Michigan Avenue  
Chicago, IL 60611  
(312) 527-4800
  - Transportation Safety Institute  
6500 South MacArthur Blvd.  
Oklahoma City, OK 73125  
(405) 686-2614
  - Wisconsin Council of Safety  
111 E. Wisconsin Avenue  
Milwaukee, WI 53022  
(414) 271-9428
  - Other state and local councils of safety
- . Passenger relations training is an important part of vehicle operator orientation training, intended to prepare operators, at least in part, for real world situations they will encounter. Training provides descriptions of the types of situations likely to occur, such as rude passengers, non-payment of fares, delays, and elderly and handicapped passengers with special needs. General guidelines and examples of specific treatments and solutions will assist the student in developing passenger relations skills. It is often helpful to include experienced drivers in these discussions to provide real life examples and insights. Role playing exercises also increase driver sensitivity to passengers' needs.<sup>1</sup>
  - . Training for unsafe conditions and accidents should be provided to operators to ensure proper responses. Unsafe conditions include vehicle skidding, because of faulty brakes, excessive speed or slippery road surfaces; tire blow outs; sudden loss of visibility in bad weather conditions; obstructions in roadway; unavoidable collisions; flooding, ice or snow conditions. Student drivers also need information on passenger evacuation techniques, disabled passenger assistance, use of fire extinguishers and other safety equipment, basic first aid (if advised to use) and procedures to use to call for emergency medical assistance.

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<sup>1</sup>A sample curriculum for passenger relations training can be found in the publication, Operator's Manual: Passenger Relations, prepared by the AFL-CIO Appalachian Council, Transit Employee Training Project, prepared for the U.S. Department of Transportation, Urban Mass Transportation Administration, Office of Transit Management.



- . Accident reporting procedures should be included in initial classroom training. Some accidents will happen and employees must know how to report them. Accident reporting forms, instructions for their completion, and procedure for accident investigations should be explained to all new employees.

On-the-Road-Training. Once classroom training has been completed, student operators are ready to get behind the wheel and maintenance and service personnel are ready to use equipment and maneuver vehicles in and around facilities. This training should include, at a minimum:

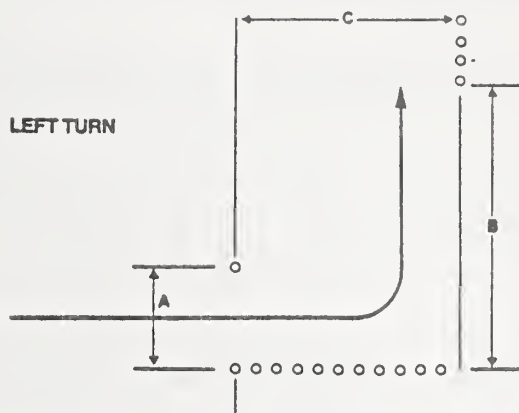
- . Explanation and physical inspection of every class of vehicle the operator may be expected to drive, including all dimensions, components and systems is the first step in road training. Instructions for handling mechanical breakdowns should also be given.
- . Vehicle driving techniques training, usually conducted in a vacant parking lot, is the next step. A listing of maneuvers adapted from the American Public Transit Association Rodeo Course is presented as Exhibit III.8. Trainees should be able to acquire the basic skills of turning, stopping, and checking clearance in two to four half-days of practice; if not, the student may not be suited to the job.
- . Actual road work should begin by operating a bus in uncongested areas. This practice should be repeated on all types of buses in the fleet. Next, the trainee should drive several types of vehicles over each route he or she may be assigned, until comfortable with the vehicles and route alignment.
- . Observation of an experienced driver in revenue service is also helpful to student operators. The roles can also be switched. The trainee operates the bus, collects revenues and interacts with the public under the scrutiny of the veteran. Upon satisfaction of the instructor and observing driver the student is ready for solo operation of revenue service.

On-going Safety Training. After the initial classroom and roadwork is completed and the employee is assigned regular duties, a program of continuing safety training begins. Topics for refresher programs include emergency response techniques, defensive driving techniques, discussion of operator identified job-related safety problems, passenger relation skills, and an on-the-road review of bus handling. Cardiopulmonary resuscitation training provided by the Red Cross or local hospital could also be made available. Maintaining and renewing a current "National Safety Council Defensive Driving Certificate of Completion" every three years is required at some systems.

The frequency of refresher programs will vary by system, but they should be conducted at least biannually. A better idea is to use regular monthly or bimonthly safety meetings (attendees should be paid at base rate) as a forum to discuss safety issues and provide additional safety training.



# EXHIBIT III.8 VEHICLE MANEUVERS



40' x 102" BUS

A = 10'-6"  
B = 23'  
C = 37'

35' x 96" BUS

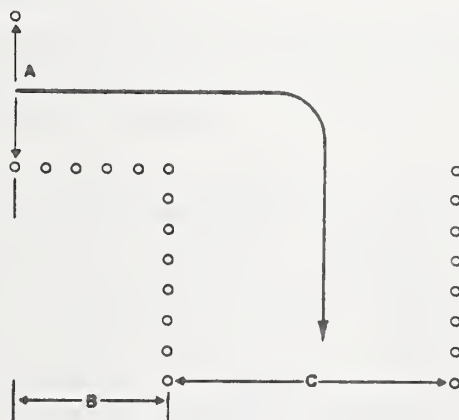
A = 10'  
B = 20'-3"  
C = 32'-6"

30' x 96" BUS

A = 10'  
B = 10'  
C = 17'-6"

—Left Hand Turns: Watch for over hang of right front corner of vehicle, as well as the "off-track" of the rear wheels (path of inside rear wheels narrower than front).

## RIGHT TURN



40' BUS

A = 11'-6"  
B = 20'  
C = 34'

35' BUS

A = 10'-6"  
B = 17'-6"  
C = 29'-6"

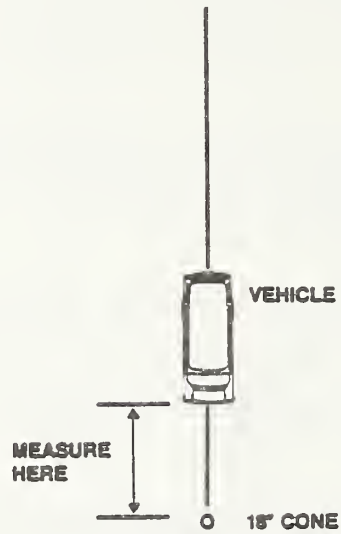
30' BUS

A = 10'-6"  
B = 15'  
C = 25'-6"

—Right Hand Turns: Watch for overhang of front corner (left in this case), but be more concerned with the "off-track" on each turn.

# EXHIBIT III.8 Continued VEHICLE MANEUVERS

JUDGEMENT STOP



PASSENGER STOP

DIMINISHING CLEARANCE

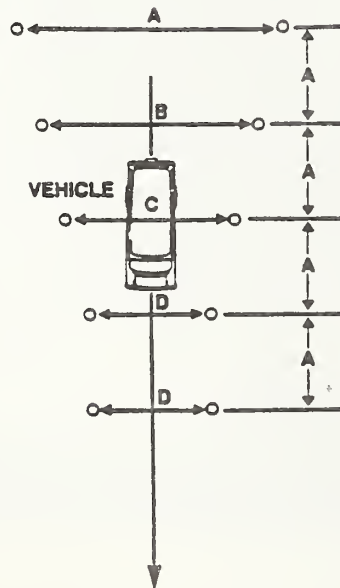
40' x 102" BUS

A = 10'  
B = 0'8"  
C = 0'4"  
D = 0'0"

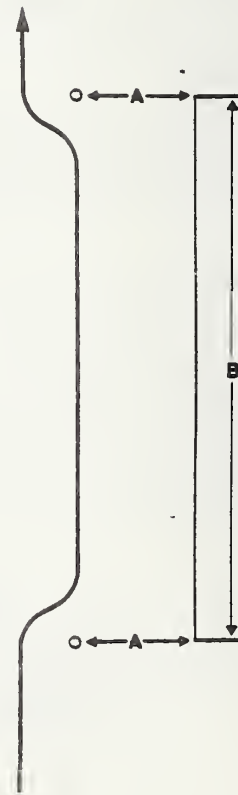
30' x 96" BUS

35' x 96" BUS

A = 0'9"  
B = 0'2"  
C = 4'10"  
D = 0'9"



A = 6'  
B = 2 BUS LENGTHS



## Other Personnel Practices

On-going personnel practices should re-enforce the importance of safety in each employee's job. Three types of practices that satisfy this objective are employee evaluation and retraining programs, disciplinary actions, and employee recognition programs.

Evaluation and retraining of all employees are important to ensure safe operation of vehicles and use of all equipment. Evaluation components include:

- . Every employee operating a vehicle should maintain a valid drivers' license. In addition, every 12 or 24 months the individual's personal driving record should be reviewed for any moving violations or DWI convictions. (See suggested guidelines in the employee selection section).
- . Physical check-ups of bus operators and mechanics should be conducted by an approved physician every 24 months, at a minimum. The vision, hearing, and physical ability standards applied to new employees should be applied here.
- . Alcohol and drug abuse are serious problems with major safety consequences in transportation industries. Transit is no exception; operators have, unfortunately, been discovered driving vehicles while impaired. A transit system should examine the legal aspects of mandatory drug testing. It is imperative that employee work rules, personnel policies, and union agreements state testing practices and penalties and if possible, make clear that refusal to submit to such tests will be construed as an admission of guilt and grounds for disciplinary action.
- . As mentioned previously, some transit systems require their operators to renew their National Safety Council's Defensive Driver Certificate of Completion every three years.
- . Ride checks of operators in revenue service allow evaluation of both driving and passenger handling safety performance. Review by a safety instructor within a month of an employee's beginning revenue service provides an opportunity to assess the operator's performance before bad habits become too hard to change. A sample ride check review form is shown by Exhibit III.9. Some systems conduct periodic ride checks of all drivers as a measure, biannually or quarterly, for example. Key safety items to observe include speed control, steering, signaling, turning, intersection operation, passing, traffic judgment, fare handling, and passenger relations.

Of course, using existing staff to observe drivers has its limitations. Surveillance of an unaware driver gives a more accurate picture of regular performance. Independent safety engineering consultants can perform ride checks, usually for an hourly fee. Another means of achieving covert observation for less or no additional cost is to exchange trained observers with nearby transit systems.



**EXHIBIT III.9**  
**RIDE CHECK FORM**

SUPERVISOR: \_\_\_\_\_  
DRIVER: \_\_\_\_\_  
BUS # \_\_\_\_\_  
ROUTES: \_\_\_\_\_

E EXCELLENT  
G GOOD  
P POOR  
F FAILURE TO COMPLY  
O OTHER

**1. Passing and Being Passed**

A. Clearance .....  
B. Illegal Maneuver .....  
C. Cooperation w/Passer .....

**2. Smoothness of Operation**

**3. Right and Left Turns**

A. Swings Too Wide .....  
B. Cuts Too Short .....  
C. Starts Wrong Lane .....  
D. Ends Wrong Lane .....

**4. Signaling—Proper Use of Signals**

A. Signal Knowledge .....  
B. On Starting From Curb .....  
C. On Turns .....  
D. On Lane Change .....

**5. Speed Control**

A. Over Speed Limit .....  
B. Too Fast For Safety .....  
C. On Turns .....  
D. On Approaching Corners .....  
E. Following Distance .....

**6. Use of Brakes**

A. Smoothness in Applying .....  
B. On Turns .....  
C. Reactions to Hazards .....

**7. Caution**

A. Intersection Approach .....  
B. In Changing Lanes .....  
C. In Passing/Being Passed .....

**8. Stop Sign/Traffic Signal**

A. Obedience to Signal/Sign .....  
B. Position After Stopping .....  
C. Fails to Make Full Stop .....  
D. Starts Before Signal Changes .....

**9. Lane Use**

A. Choice of Proper Lane .....  
B. Position in Lane .....  
C. Unnecessary Changing .....

**10. Loading/Unloading**

A. Approach to Stop .....  
B. Smoothness of Stop .....  
C. Door Use .....  
D. Position After Stop .....  
E. Use of Mirrors .....

**11. R. R. Crossings**

A. Stopping Distance from Tracks .....  
B. Looking and Listening .....  
C. Opening of Door .....  
D. Crossing Tracks (waiting for traffic to clear) ..

Overall Ability to Use Courtesy on Road .....

Courtesy to Passengers & Public .....

Use of Seat Belt .....

Use of Signal Lamps Only When Required .....

Defensive Driving and Good Driving Habits .....

Driver Attitude Toward His Job and Responsibility....

Route Knowledge and Comprehension .....

Personal Appearance .....

Remarks .....

COMMENTS:

Of course, using existing staff to observe drivers has its limitations. Surveillance of an unaware driver gives a more accurate picture of regular performance. Independent safety engineering consultants can perform ride checks, usually for an hourly fee. Another means of achieving covert observation for less or no additional cost is to exchange trained observers with nearby transit systems.

- . Safety rides should be given by a supervisor or safety instructor to an operator involved in a preventable accident, as quickly as possible following the incident. The operator is observed in the same way as on a ride check and counseled on ways to avoid accidents and proper passenger regulation techniques.
- . Periodic inspections/observations of all bus servicing personnel should be performed to evaluate driving performance and observance of safety rules for handling equipment and vehicles.
- . Periodic inspections/observations of maintenance personnel should be performed to evaluate safety of their performance and of their work stations.
- . All facilities and equipment on the transit property, including that used by administrative personnel, should be properly maintained and employees should be trained in its use to prevent damage and accidents.

Disciplinary actions in response to safety violations are necessary, to inform other employees that safety is taken seriously and to give notice to the offending employee that corrective actions are needed. Policies and procedures should be established in cooperation with legal counsel because employment disputes involving wrongful termination and due process violations are major exposures. Upon a finding that an accident was preventable and when all review and appeal procedures have been duly administered, the employee should be disciplined in accordance with an established policy in which disciplinary actions are based on 1) the degree of negligence by the employee; 2) the severity of the accident; and 3) the employee's safety record.

A point system is frequently used to ensure impartiality of treatment. An example of this type of program, used by the Dallas Transit System, is presented in Exhibit III.10. The first part of a point system requires that a certain predefined number of points be assigned according to the severity of the accident. The second part provides for progressive disciplinary actions, depending on the number of points accumulated in a stated time period. The third part allows the use of merit points to counterbalance penalty points for drivers with historically safe records.

Employee recognition is often used to encourage and reinforce good and improved performance. Most transit systems recognize those employees with exceptional safety records: no preventable accidents or time lost through on-the-job injuries over a given period of time. Important considerations in designing an employee recognition program include the following:

## EXHIBIT III.10

### SAMPLE GUIDELINES FOR DISCIPLINE

#### DALLAS TRANSIT SYSTEM SAFETY PROGRAM

##### 7.13 Guidelines for Discipline

A. In the event of a preventable accident, the employee may be disciplined in accordance with the degree of negligence by the employee, the severity of the accident, and the employee's past record.

1) A preventable accident is defined as any occurrence involving a DTS owned or operated vehicle which results in property damage and/or personal injury regardless of who was injured, what property was damaged, to what extent, or where it occurred in which the driver in question failed to do everything he/she reasonably could have done to prevent it.

2) Points will be assigned to preventable accidents according to severity of the accident as follows:

One Point	Each \$500 in damage accumulating from one or more accidents occurring in any twenty-four consecutive month period, resulting in minor damage to the System's vehicle or minor damage to other vehicle or property.
-----------	---

Two Points	Considerable damage to System's vehicle or to another vehicle or property; or if the accident results in the minor injury of any person.
------------	--

Three Points	Major damage to System's vehicle or to another vehicle; or property; or if the accident results in minor injuries to more than one person or serious injury to one person.
--------------	--

Five Points	Accident causing the death of any person or serious injury to more than one person or property damage of more than \$20,000.
-------------	--

Under \$1,000	Minor damage
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\$1,000-\$2,500	Considerable damage
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Over \$2,500	Major damage
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## EXHIBIT III.10 Continued

### SAMPLE GUIDELINES FOR DISCIPLINE

- B. The following steps of progressive discipline will apply to all DTS employees who have accumulated the following number of points in a twenty-four (24) consecutive month period:.

One Point or no points	Counseling
Two Points	Written warning and/or suspension of up to three days.
Three Points	Up to five days suspension.
Four Points	Up to ten days suspension
Five Points	Subject to discharge, suspension, or such other penalty as is appropriate.

- C. All DTS employees who accumulate five (5) points in any twenty-four (24) consecutive month period will be subject to discharge or such other penalty as is appropriate.
- D. Effective October 1, 1983 an employee who earns a five (5) year safe driver award under the Dallas Transit System Safe Driver Award Program, Section 7.2 A 1) above, shall be credited with one merit point, and shall be credited with one additional merit point for each additional five (5), year safe driver award the employee earns thereafter, up to a maximum of four (4) points.
- E. Such an employee may use up to a maximum of two (2) earned safe driver merit points to offset and reduce points which are assigned to the employee as a result of a preventable accident, in accordance with Section 7.13 subsection A. above, providing the employee requests the reduction in preventable accident points in writing to the Director of Claims and Safety within five (5) working days of the Safety Coordinator's written determination in Section 7.12 subsection A above; provided that such request will not affect the employee's grievance rights.
- F. An employee who is not included in the safe driver award program, Section 7.2. above, may earn and use safe driver merit points as described above, provided the employee's driving record with the Dallas Transit System would otherwise have entitled the employee to the appropriate safe driver award or awards.

NOTE: Merit points may not be used to offset and reduce points when the accident was caused by the operator's gross negligence or criminal negligence under the Texas Penal Code.

- G. Failure to complete a written report of every accident/injury no matter how slight, whether occurring on or near the bus immediately following his/her relief from work may result in suspension or discharge.
- H. Falsifying an accident report or attempting to settle a claim with the parties involved in an accident may result in suspension or discharge.

- . Match the award to the level of achievement, whether cash or other form of recognition, e.g., certificates, medals, patches.
- . Conduct team competitions in addition to individual awards based on reductions of traffic incident rates and/or reductions in worker's compensation insurance claims. For large systems, competition between garages or bases is a likely arrangement. For others, teams can be formed.

The National Safety Council has organized a recognition program complete with certificates, pins, patches and other items available at a minimal fee. For information contact:

National Safety Council  
Safe Driver Awards Program  
441 N. Michigan Ave.  
Chicago, IL 60611  
(312) 527-4800

An example of this program as implemented at the Dallas Transit System is provided in Appendix E.

In designing and conducting a safe employee recognition program, one objective should remain in the forefront: motivate employees to be conscious of their own safety and the safety of others, whether fellow employees or the public.

### **Service Factor Considerations**

A transit system's operating environment can directly affect the number and type of accidents incurred. Heavy auto, truck, and pedestrian traffic conditions, poor roads (e.g., extensive potholes), inclement weather conditions, and less than ideal roadway configurations for bus maneuverability can result in frequent non-severe accidents, the total accumulated cost of which can be significant. Safety-minded service planning can, to some degree, mitigate environmental hazards. Three areas for consideration are service design; service and operator scheduling; and bus stop placement and design.<sup>1</sup>

#### **Service Design**

Ridership demand, passenger access, and travel times are the primary criteria in route design. Safety should be another. An analysis of proposed and existing

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<sup>1</sup>Much of the discussion regarding service factor considerations is based on material found in the Wisconsin Bus Safety Manual, prepared by National Transit Services in association with The David L. Ellis Agency for the Bureau of Transit, Wisconsin Department of Transportation, September 1985, pp. 34-36.

routes to reduce exposure to environmental risks should examine the following factors:

- . Turning movements should be minimized.
- . Use of controlled intersections (e.g., traffic signals, stop signs) should be maximized.
- . Dangerous intersections should be avoided, if possible.
- . Crossing lanes of traffic, especially in short distances, should be avoided.
- . Roadways with lower traffic levels should be selected if possible.
- . Turning radii, grades, and auto speed limits on routings should be considered.

These loss control considerations are aimed at improving bus maneuverability and reducing stress on vehicle operators.

### **Service and Operator Scheduling**

Proper scheduling of service and operator shifts can promote safe street operations. Schedules with inadequate running time can place undue stress on drivers, and encourage speeding and hurried passenger boarding and alighting, all of which increase exposure to risks. Too much running time however, results in a dissatisfied riding public. Running times, therefore, need to be monitored and evaluated in revenue service during different traffic periods (morning and evening peak commuting periods and midday), and during changing seasons, since weather and increased school traffic conditions may affect schedules. Reviewing on-time performance reports will indicate scheduling difficulties. Ride checks by supervisory personnel will permit direct observation of scheduling problems.

Excessive use of overtime work during periods of operator shortages can also place stress upon drivers. The same applies to maintenance personnel. No one performs well when he or she is tired and reduced alertness and reaction time can result in costly accidents. A log to monitor driver and maintenance employee (if applicable) hours of work per day and per week will alert supervisors of overworked and possibly overtired employees. Above a specified limit, management approval should be required. If overtime operations are a necessity, road supervision should be increased.

### **Bus Stop Placement and Design**

Bus stop placement and design affect both passenger and vehicle safety. Passengers are exposed to potential risks while waiting for, boarding, and alighting a bus. First, travelers should be protected from street traffic by allowing buses to stop at designated stops only, by locating stops close to pedestrian traffic controls to discourage jaywalkers, and by allowing adequately sized waiting areas on an



appropriate width of sidewalk. Second, passenger movements at high volume transfer points should be organized, orderly, and well marked. For example, alighting locations could be separated from boarding locations so large groups of people are moving in the same direction instead of against each other. Physical barriers to prevent passengers from walking in bus lanes may be necessary at multi-lane transfer centers.

Third, bus shelters, although a desirable amenity to waiting passengers and a source of additional advertising revenue to the transit system, pose certain liabilities. Regular inspections should be conducted for cracked or shattered glass or plexiglass panels and for damaged benches. Faulty items should be quickly repaired or replaced. Snow and ice should also be promptly cleared because the transit system may be liable for a fallen passenger's injuries.

Vehicle safety is a design concern at curbside loading zones. Except for off-road facilities, vehicle safety is at risk while the bus is decelerating to approach the stopping area, stopped at the curb for passengers to enter and leave the vehicle, and accelerating to re-enter moving traffic. Guidelines for safe bus stop lengths are presented in Exhibit III.11. Additional preventive safety measures include:

- . The use of curb cut bus stops where sidewalk widths permit. By removing the bus from through traffic, opportunities for rear-end collisions between a moving automobile and stopped bus are minimized.
- . Farside, as opposed to nearside stops also reduce the risk of collision at intersections permitting right turns. Right turning vehicles often pass a stopped bus on the left and proceed to cut in front of the bus to make the right turn. An accident may result if the bus begins to accelerate in its lane to cross through the intersection.

## **Physical Property Protection**

To protect physical property from accidents and other forms of loss, transit systems should conduct regular inspections, implement fire safety and security measures, and enforce safe and security-minded operating procedures. Loss control guidelines for physical property are discussed below under three headings: facilities, equipment and supplies, and financial assets.

### **Facilities**

Facilities most susceptible to hazards are maintenance work areas, fueling stations, and washing bays. To minimize exposure, non-essential and untrained personnel should be barred from these areas. In fact, non-authorized personnel should be restricted from all transit system facilities. Visitor passes from the security department should be issued only to visitors on-site for official business purposes.

### EXHIBIT III.11

#### RECOMMENDED LENGTH OF BUS STOP ZONES

Recommended Length of Bus Stop Zones							
Bus Seating Capacity (approximate)	Bus Length in feet	One Bus			Two Bus		
		Nearside	Farside	Midblock	Nearside	Farside	Midblock
30	25	90	65	125	120	90	150
35	30	95	70	130	130	100	160
39-45	35	100	75	135	135	110	170
45 and over	40	105	80	140	140	120	180

Unanticipated vehicle movements are a major cause of accidents in maintenance and servicing areas. Examine facilities for blindspots and visual obstructions. Preventive actions include installing mirrors to increase line of sight, erecting warning signs indicating vehicles moving in the area, and painting safety lines to enclose pedestrian walkways. All personnel responsible for the movement of vehicles within these areas should receive safety rule instructions, including use of the horn to signal movement and use of spotters to assist in backing up maneuvers.

An emerging third-party liability exposure involves environmental pollution from underground fuel storage tanks. The Environmental Protection Agency (EPA) has proposed technical guidelines for tank construction and financial responsibility requirements for clean-up of an accidental leak. Transit systems should be alert to this hazard exposure and related pending regulations.

### **Equipment and Supplies**

Equipment and supplies cover a broad array of items ranging from sophisticated electronic testing equipment and computers to manual tools and light bulbs. Potential hazards include on-the-job injury to workers, fire loss, and theft loss.

To reduce worker injuries, all employees should complete safety training and awareness programs. (See the previous section on Employee Safety Programs for specific recommendations.) In addition, potentially dangerous equipment (e.g., hydraulic lifts and washing equipment) should be regularly inspected in accordance with the manufacturer's recommendations given local operating and environmental conditions. Work areas should be regularly inspected for orderliness and relative cleanliness. Faulty electric wiring, inadequate or burned out lighting, slippery floors, improperly disposed of greasy rags and flammable liquids, and loose tools strewn around work stations contribute to employee injuries. Local, state, and Federal industrial safety codes and regulations should be enforced.

Fire losses can be mitigated by preventive and reactive measures. Several preventive measures have been described--clean work areas, proper storage of flammable liquids, safe electrical wiring, safe standard operating procedures, and safe driving practices. Unfortunately, some fires will occur despite best efforts, so adequate and operable alarms and fire fighting equipment are necessary. A visit and inspection by the local fire department can help determine if fire detection and extinguishing equipment are adequate and properly located. Smoke/heat detectors, sprinkler systems, and extinguishing equipment should be reviewed. Monthly tests to ensure the equipment is in good working order should be conducted by the in-house safety staff; annual and biannual tests by licensed inspectors are also recommended. All inspections should be recorded on the equipment and in a central log.

All employees should be trained in the operation of fire extinguishers and the proper procedure for notifying the local fire department if such notice is not part of the alarm system. Employees should be able to provide information on the type



of fire and location of origin. Drills in evacuation procedures are another safety precaution.

Loss by theft is particularly irritating. These crimes can be perpetrated by burglars unconnected to the transit system, or, unfortunately, by the system's own employees. Measures aimed at controlling trespassers include installing a burglar alarm system to ring at a central station and securing doors, windows, and storage facilities with appropriate locks. Depending on the size of the transit system and local experience with theft problems, close-circuit monitoring and/or security personnel may be warranted. Local police security experts may be able to conduct an inspection and offer recommendations to improve security.

A well managed inventory control program will discourage employee pilferage. The most important control measure is to restrict physical access to parts and supply inventories to a limited number of personnel during all shifts the storeroom is open. Periodic sample physical inventories conducted by a person other than the employee who issues the materials should be compared to book levels. In addition, spare parts usage rates should be monitored for irregularities. Inventory levels should not be excessive, since high levels might encourage theft--it might be assumed that a few items wouldn't be missed. Separation of duties ensures accountability among co-workers and strengthens internal control; e.g., the purchasing function should be separate from the parts issuance function. Written parts requisition forms also reinforces accountability by providing a paper trail recording all parts and supplies issuances to personnel.

### **Financial Assets**

Financial assets of the organization should be protected from embezzlement, fraud, and theft. Job applicants for positions in accounting and financial management should be carefully selected and employment references checked. Generally accepted accounting principles should be followed. Among these practices is the separation of financial duties among employees. For example, employees handling money should not be responsible for recordkeeping; nor should employees reconciling bank statements be responsible for writing checks or making deposits. Computerized financial systems make safeguards such as the use of code words, separation of duties, and routine crosschecks imperative. An annual outside financial audit and additional regular or random internal audits also serve to protect financial assets.

Cash handling procedures are particularly important since transit systems process substantial sums of loose coins and paper on a daily basis. Loss prevention measures include: controlled access to money handling locations, prompt counting (or weighing), frequent deposits to the bank, separation of duties, supervisory surveillance, and strictly enforced procedures.

## **Professional Liability Prevention**

The best protection against professional liability losses is a well qualified staff and board of directors who carry out their duties professionally, with due care. It is equally important to have decisions and activities well documented and to establish written policies and operating procedures for all professional functional areas. Specific recommendations for accomplishing these objectives are discussed below for two groups: directors and officers; and professional staff.

### **Directors and Officers**

Directors and officers conduct the highest level of decision making and assume overall responsibility for the management of a transit system, thereby exposing themselves and the organization to a variety of liability suits. In some states, limits on liability and even immunity for board members have reduced some of this exposure. State laws should be checked for liability status. In those states without protection, board members should exercise due care and show good faith in carrying out their duties. Ways that a board member may demonstrate a conscientious regard for the responsibilities of his or her position include the following:

- . Attendance at all full board meetings and appropriate committee meetings.
- . Understanding the organization's operations.
- . Knowledge and enforcement of the organization's bylaws, particularly as they apply to board members, e.g., frequency of meetings, minutes of meetings, appropriate areas for board actions.
- . Documentation of all meetings and actions, with particular attention to accuracy and completeness in recording discussions and votes on controversial topics.
- . Use of outside expert advice on complex issues, including legal counsel, accountants, risk managers, engineers, and management consultants.
- . Retention of legal counsel to review all contracts with outside contractors for risk exposure.
- . Exercise of ordinary prudence and good judgment.

### **Professional Staff**

Professional staff assume decision making responsibilities for the organization's day-to-day operations. The following preventive measures will provide some protection against liability losses.

- . Prepare job descriptions detailing responsibilities and qualifications requirements for each professional staff position.

- . Determine that employees and contractors are properly certified, accredited, or licensed, e.g., certified public accountants (CPA) and professional engineers (PE).
- . Be sure that staff members assume responsibilities only in their particular area of specialty.
- . Document all professional procedures and issue guidelines on the types of activities the organization is authorized to conduct.
- . Provide appropriate levels of supervision.
- . Establish procedures to ensure that personnel records remain confidential. Require release forms if information is made available to anyone outside the organization.
- . Investigate and analyze all claims to determine the events leading to them. Analysis should lead to preventive measures such as better training, closer supervision, better in-house documentation, changes in procedures, or replacement of equipment.

Loss control procedures should also be used to prevent liability in wrongful termination allegations. The personnel department should enforce all civil rights and other state laws impacting employment by establishing procedures consistent with the legal requirements. Job performance evaluation policies should be clearly stated and uniformly applied to avoid charges of arbitrary dismissal. Supervisors should be made aware of their obligation to follow official personnel practices. Lastly, all hiring, evaluation, firing, and disciplinary actions should be well documented.

## **Passenger Safety Program**

Up until this point, the transit systems' safety responsibilities have been discussed. The riding public must also do its share to ensure safe passage.

### **Passenger Awareness**

A transit system can assist passengers by telling them how to enjoy a safe trip. Methods of communication include brochures distributed on the vehicle; instructional signs in large clear lettering posted throughout the bus, e.g., STAND BEHIND THIS LINE; public announcements on television and radio; safety reminders on service schedules and maps; posted safety information at bus shelters and transfer facilities; and transit system speakers at schools and community group meetings. Whatever media are selected, the message should address the following topics and/or instructions:



These simple, but vital instructions can go far in helping to provide safe public transportation to the community.

- . How to use wheelchair accessible bus service (if available).
- . How to use kneeling buses (if available).
- . To stand clear of the bus until it has made a complete stop.
- . Not to run after the bus once it has pulled away from the stop.
- . Not to distract drivers with questions or conversation once a vehicle is in motion.
- . To keep the area between the driver and front door clear at all times.
- . Not to sit on the stairwells of the bus.
- . To use handrails and stanchions while standing or walking through a moving bus.
- . Not to push heads, hands, or arms out of bus windows.
- . To keep packages and umbrellas out of the aisle to avoid tripping other passengers.
- . To wait for the bus to leave before crossing the street.
- . Not to carry on board hazardous items such as flammables, unprotected glass, or guns.
- . To wait until all riders wishing to get off the bus have done so before boarding.

### **Security**

A transit police force has become a reality for most transit systems. Its function is to provide a real, and perceived security for passengers, particularly for those who are most vulnerable to criminal violations. If travel on public transportation is viewed as dangerous, the community's needs are not being served. Even the known existence of a transit security force will deter crimes against individuals and property.

Methods for organizing and staffing a security force vary by transit system environment and size. Large systems typically hire their own force or contract the service out. Medium- and small-sized systems may use local police to monitor safety, both on and off-duty officers. Either approach can assist in providing journeys safe from vandalism, theft, and assault.

# **APPENDIX A**

## **GLOSSARY**





## GLOSSARY

The definitions in this glossary are from the following sources:

1. Risk Management Manual, published by the Texas Association of School Boards.
2. Local Government Risk Management Handbook, written by William W. Dotterweich, Donald F. Norris, and Robert L. Sinclair, and published by the Municipal Technical Advisory Service/The University of Tennessee in cooperation with the Tennessee Municipal League. Their glossary was adapted from Risk Management and Insurance Buying Guide for Iowa Municipalities, written by Emmett Vaughan and published by the Institute of Insurance Education and Research of the University of Iowa.
3. Public Agency Risk Management Manual, published by the Association of Washington Cities, et al. Sources cited for that glossary were Liability Insurance for Colorado Municipalities, published by the Colorado Municipal League; Dictionary of Insurance Terms, published by the United States Chamber of Commerce; and Administration of the School Insurance Program, published by the California State Department of Education.

**Accident**--An unforeseen, unintended event.

**Accidental Death and Dismemberment Insurance (AD&D)**--An insurance coverage generally written on a group basis to provide a death benefit in case of accident. This insurance is frequently used as travel coverage to supplement other employee benefits.

**Acquisition Cost**--The cost to an insurer of putting insurance business on its books, including agents' or brokers' commissions.

**Actual Cash Value**--New replacement cost, less depreciation.

**Additional Insureds**--Names added to the insuring clause, at the request of the insured, stating the interests involved.

**Adjuster**--A person who settles claims for insurers. An adjuster may be an employee of an insurer or an independent contractor.

**Adjustment**--The settlement of a claim.

**Admitted Company**--An insurance company that has been licensed by a particular state insurance department to do business within that state.

**Adverse Selection**--A situation in which an insurer fails to get an adequate cross section of risks and the result is greater than average exposure.

**Agent**--A representative of an insurer who has the authority to obligate or bind the insurer in some situations. This binding authority is limited by contract and law, however. An agent may be an independent contractor or an employee of the insurer and is licensed by the state.

**Agent of Record**--A term customarily used to refer to an agent who is given written authorization by an insured to act as the insured's exclusive representative in those matters of insurance covered by the letter of authorization.

**Aggregate**--The greatest amount recoverable on account of a single loss or during a policy period, or on a single project.

**All Risk Insurance**--Insurance that covers losses caused by all perils within the line of coverage except those specifically excluded in the coverage contract.

**Apportionment**--Where more than one insurance contract covers a loss, the determination of the extent to which each contract covers that loss.

**Appraisal**--An evaluation of a property item prepared according to certain standards for specific usage. Such an evaluation may be based on replacement value, actual cash value, or market value.

**Appreciation**--The amount by which property values increase as a result of various economic factors.

**Audit**--In certain kinds of insurance, a survey of the insured's records to determine the premium due the insurer.

**Audit Premium**--The additional premium to which the company is entitled or the return premium to which the insured is entitled after an audit and refiguring of the base on which the original or deposit premium was charged.

**Average Rate**--The rate representing the average of each of the individual rates applied to a group of buildings.

**Basic Rate**--The rate applied to a whole class of similar risks. This rate is usually subject to modification when applied to a particular risk according to the characteristics of that

individual risk.

**Binder**--A temporary insurance contract pending execution of the policy contract. Except for specified differences, the terms of the binder are, by implication, those of the contract that is intended to replace it.

**Blanket Policy**--A policy that in a single contract insures a number of locations or risks against the same perils and for a single limit of coverage.

**Boiler and Machinery Insurance**--Coverage for loss arising out of the operation of pressure, mechanical, and electrical equipment. It may cover loss to the boiler and machinery itself, damage to other property, and business interruption losses.

**Bond**--An obligation of a surety to protect the obligee against financial loss caused by act or omission of the principal.

**Bond, Bid**--A guarantee that a contractor will enter into a contract on which he has bid if it is awarded to him, and furnish a contract bond as required by the terms of the contract.

**Bond, Fidelity**--A promise to make good financial loss due to the dishonesty of employees; a financial guarantee of the performance of an implied obligation.

**Broker**--An independent representative who can negotiate converge on behalf of an insured.

**Broker of Record**--An individual named by the insured as his/her exclusive representative in negotiating insurance contracts.

**"Builders" Risk Form**--A type of fire insurance that indemnifies for loss of, or damage to, a building under construction from specified perils. Insurance may be written under a completed value form with the estimated final value used as the basis for the amount of insurance, or it may be written under a reporting form under which monthly reports of value are made by the insured.

**Cancellation**--The termination of an insurance policy or bond before its expiration by the insured or the insurer.

**Captive Agent**--An agent who, by contract, represents only one company and its affiliates. (Compare with "Independent Agent.")

**Catastrophe Coverage**--A term used to describe high-limit coverage designed to insure near total losses.



**Certificate of Insurance**--Written verification from an insurance company of the existence of insurance, the policy amount, the insured(s), and the period for which coverage is effective.

**Class Rate**--The premium rate applicable to a specified class of risk.

**Coinurance**--In property and casualty insurance, a clause or provision in an insurance policy requiring a specified amount of insurance based on the value of the property insured. Normally, there is a premium reduction for purchasing insurance to some percentage of the value of the property--if the insured fails to comply with the clause, he/she will suffer a penalty in the event of partial loss.

**Collision Insurance**--Insurance against loss to insured property caused by striking or being struck by an object; includes loss caused by upset.

**Commission**--The amount paid by an insurer to the agent or broker as a fee for producing the business.

**Comprehensive**--Covers any direct and accidental loss or damage to described owned automobiles except that caused by collision or upset. Also referred to as "Other than Collision."

**Comprehensive Dishonesty, Destruction, and Disappearance Policy**--All risk protection for money and securities on and off the premises caused by dishonesty, mysterious disappearance, or destruction.

**Comprehensive General Liability**--A broad form of liability insurance that insures against all declared existing liability hazards and any additional liability hazards that may occur during the policy terms, arising from buildings, premises and operations, independent contractors, or products and completed operations.

**Concealment**--The failure on the part of the insured to disclose a material fact that might influence an insurer's acceptance or rating of a risk.

**Concurrent Insurance**--Insurance that covers the same interest and perils under the same conditions as another policy. Two or more policies may be written to cover a single risk; if so, both should provide coverage under exactly the same terms.

**Consequential Loss**--A loss not directly caused by a peril insured against, but resulting indirectly from an insured peril.

**Contingent Liability**--Liability for damages arising out of the acts or omissions of

others, not employees or agents.

**Contractual Liability**--An obligation assumed by contract to pay damages for which another is legally liable. (See also "Hold-harmless Agreement.")

**Contribution Clause**--A clause sometimes found in insurance contracts that provides that each insurance contract in force will contribute to any loss in proportion as the value insured by that policy relates to the total value insured.

**Coverage**--A term used to designate the type of protection provided by an insurance policy.

**Declarations**--Statements by the insured giving information about the risk insured on the basis of which the policy contract is issued and the premium determined; usually a part of the contract.

**Deductible**--An amount of loss to be absorbed by the insured before an insurer becomes liable for payment.

**Depreciation**--An amount charged against property value to cover aging and obsolescence.

**Deviation**--Deviation is the difference from the standard form or rate established by a rating bureau.

**Direct Loss**--Loss resulting directly and immediately from the hazard insured against.

**Direct Writer**--A term used to describe an insurer that markets insurance only through its employees and not via agents or brokers.

**Discovery Period**--The time allowed the insured after termination of a policy to discover a loss that occurred during the period covered by the contract and that would have been recoverable had the contract continued in force.

**Earned Premium**--Earned premium is the amount of premium covering the period a policy has been in force.

**Effective Date**--The date on which an insurance binder or policy goes into effect; starting date.

**Employers' Liability**--Legal liability imposed on an employer making him/her responsible to pay damages to an employee injured by the employers' negligence. Generally, replaced by workers' compensation, which pays the employee whether the employee has

been negligent or not.

**Employers' Nonownership Liability**--Covers the liability of the insured for bodily injury and property damage arising from accidents due to the use of autos owned by employees while sued in the interest of the insured.

**Endorsement**--An amendment to an insurance policy that in some way modifies the original contract provisions.

**Errors and Omissions Insurance**--Insurance against loss due to failure, through error or unintentional omissions, such as errors in design by a municipal engineer.

**Excess Insurance**--Excess insurance provides coverage after coverage provided by an underlying policy has been exhausted. Excess coverage is designed to respond to large but infrequent losses.

**Exclusions**--Exclusions are specific items identified as not being covered under a particular policy.

**Exemplary (Punitive) Damages**--Damages awarded to the plaintiff over and above what will barely compensate him for his/her loss, where the work done was aggravated by circumstances of violence, oppression, malice, fraud, or wanton and wicked conduct on the part of the defendant, and are intended to solace the plaintiff for mental anguish, shame, degradation, or other aggravations of the original wrong, or else to punish the defendant for his evil behavior or to make an example of him/her.

**Expense Ratio**--The ratio of expenses to premiums.

**Experience**--(1) The loss record of an insured or of a class of coverage; (2) classified statistics on events connected with insurance, of outgo or of income, actual or estimated.

**Explosion, Collapse, Underground Property Damage (XCU) Insurance**--Hazards often excluded from liability coverage, generally defined as follows:

**Explosion damage:** Property damage arising out of blasting or explosion, but not including damage arising out of explosion of air or steam vessels, piping under pressure, prime movers, machinery or power-transmitting equipment.

**Collapse:** Collapse of, or structural injury to, any building or structure due to (1) grading of land, excavating, borrowing, filling, back-filling, tunneling, pile driving, coffer-dam work or caisson work; or (2) moving, shoring, underpinning, raising, or demolishing any building or structure or removal or rebuilding of any structural support thereof.



**Underground property damage:** Property damage to wires, conduits, pipes, mains, sewers, tanks, tunnels, any similar property, and any apparatus in connection therewith, beneath the surface of the ground or water, caused by, and occurring during the use of, mechanical equipment for the purpose of grading land, paving, excavating, drilling, borrowing, filling, back-filling, or pile driving.

**Exposure--**A situation or condition that lays one open to loss or to the risk of loss.

**Extended Coverage Endorsement--**Covers property for same amount as fire policy against all direct loss for damage caused by windstorm and hail, explosion, riot and civil commotion, aircraft, vehicles, and smoke.

**Floater--**A floater is usually an all-risk type of policy used to insure property that is moved frequently or that is a high-value specialty item.

**Group Insurance--**Group insurance provides coverage for a number of people under a single policy provided that the group is not formed solely for the purpose of securing insurance.

**Hazard--**A condition that creates or increases the probability of a loss.

**Hold-Harmless Agreement--**A contract that aims to release one party from liability for specified losses arising out of a contractual relationship.

**Incurred Losses--**The total of all losses within a fixed period.

**Incurred Loss Ratio--**The percentage of losses incurred to premiums earned.

**Indemnity--**Making "whole," or restoring financially, after a loss.

**Independent Agent--**A person operating under the American Agency System, representing several property and liability insurers, and dividing the policies he or she writes among the various companies represented.

**Independent Contractor--**One who performs work for another, whom is not subject to the control or direction of the party for who the work is performed and who is not an employee of the party for whom the work is performed.

**Insurable Interest--**The legal interest of value in property, people, or events for which an insured may seek coverage.

**Insurance--**Insurance is a social device by which risks of financial loss are transferred from one individual to a group. The group guarantees indemnity to each of its

participants for insured losses.

**Insurance Audit**--An insurance audit is a survey of all coverages that have been purchased by a particular insured. Such an audit usually includes an analysis of all hazards covered, an evaluation of all coverage forms used, and review of the rating procedures applied to each risk.

**Insuring Agreement**--An insuring agreement is that part of an insurance contract that outlines the protection afforded by the contract subject to other conditions and exclusions found within the policy.

**Judgement**--The decision of a court or the reason for such decision.

**Liability Insurance**--Any form of coverage whereby the insured is protected against claims of other parties arising from specified causes.

**Liability Risks**--Exposure of people or property to legal risk of loss or damage as a result of a negligent act by some party or the failure of that party to act prudently.

**Lloyds**--Lloyds usually refers to a group of underwriters at Lloyds, in London, who participate in making contracts of insurance. Each individual underwriter is liable for the portion of the coverage to which he/she subscribes.

**Loading**--Loading refers to an amount added to a rate of premium to cover more than an ordinary hazard or expense.

**Loss**--Any destruction or disappearance of value.

**Loss Control**--Reducing or eliminating preventable losses.

**Loss Ratio**--Loss ratio is a percentage derived by dividing the dollar amount of losses experienced by an insured risk or group of risks by the premium collected from the risk(s).

**Manual Rates**--Premium rates for given classifications of risk, published in a manual; often subject to modification for the individual risk.

**Master Policy**--A master policy is one under which two or more risks are insured and under which certificates referring to the master policy are sent to individual insureds.

**Maximum Probable Loss**--Maximum probable loss is the maximum loss likely to occur and is determined by the relationship between the loss frequency and loss severity.

**Multiple Line Insurance**--Policies that combine many perils previously covered by

individual policies of firm and liability companies.

**Mysterious Disappearance**--Disappearance or loss of an item where no evidence of burglary or robbery in any form is present.

**Named Perils**--A policy issued specifically listing the perils insured against.

**Negligence**--The failure to act as a reasonable and prudent person would under similar circumstances.

**Object**--As used in a boiler and machinery insurance policy, refers to any boiler pressure vessel, machine, or apparatus described in the schedules of the policy.

**Occupational Safety and Health Act of 1970 (OSHA)**--A federal statute establishing safe and healthy working conditions on a nationwide basis. The act sets job safety and health standards enforced by Labor Department safety inspectors and also provides for compilation of relevant statistics on work injuries and illnesses.

**Occurrence**--An accident or repeated exposure to conditions that result in injury to people or damage to property or an act or related series of acts that inflict injury to people or damage to property.

**Omnibus Clause**--A clause extending coverage to people other than the named insured.

**Other-Insurance Clause**--A provision stating what is to be done at the time of loss in case any other contract of insurance protection includes the same property and perils.

**Package Insurance**--Multiple coverages combined for rating and coverage purposes.

**Peril**--The cause of a loss insured against in a policy.

**Pool**--An organization of insurers or reinsurers through which particular types of risk are underwritten with premiums, losses, and expenses shared in agreed ratios.

**Premium**--The consideration charged by an insurance company for insuring a particular risk.

**Property Risks**--Exposure of real or personal property to perils which give rise to possible losses.

**Pro Rata Cancellation**--Provides for the return of all unearned premium, without the penalty associated with short-rate cancellation.



**Pro Rata Distribution Clause**--Provides that all coverages will be distributed on a pro rata basis relative to the adjusted total values at risk.

**Public and Institutional Property Form**--A special form of property insurance for public bodies that covers all buildings and structures and designated property of a city, county, or state. Eligible risks are granted credits from published rates.

**Pure Risk**--Risk situation in which there is a chance of loss but no chance of gain.

**Rate**--The amount charged for insurance coverage on a particular risk for a specific period of time.

**Rating Bureau**--An organization that classifies risks and promulgates rates, usually on the basis of statistical data compiled by the bureau or of inspection of risks made by it.

**Rating, Experience**--Computing a premium based on the loss experience of the risk itself. Essentially a comparison of actual losses with expected losses.

**Rating, Merit**--Determination of a rate for an individual risk on the basis of its variation in hazard from the average or standard for its class.

**Rating, Retrospective**--A method of rating that adjusts the final premium of a risk in accordance with the experience of that risk during the term of the policy for which the premium is paid.

**Rating, Schedule**--Making or modifying the premium rate for an individual risk on the basis of the physical conditions that affect the probability of loss.

**Reinsurance**--The process by which an insurer distributes risks undertaken among other insurers with all sharing the premium and the exposure. A reinsurance *treaty* is a broad and often automatic agreement that covers some portion of a particular class or classes of business, i.e., the insurer's entire workers' compensation or property book of business. In contrast, a *facultative* agreement covers a specific policy risk of the ceding insurer and requires the two parties to agree on terms and conditions on a contract-by-contract basis.

**Replacement Cost**--The actual cost of replacing property that has been damaged or destroyed with property of like kind and quality.

**Reporting Policy**--A policy under which the insured is required to report values of risk at periodic intervals. The premium for such a policy is adjusted according to the average exposure.

**Reserve**--An amount set aside to cover the expected amount of loss, or a fund set up as a contingency to cover future losses.

**Rider**--An attachment to an insurance contract expanding the coverage provided by the contract.

**Risk**--The chance or possibility of financial loss.

**Risk Evaluation**--The process of assigning an economic value to a particular loss exposure.

**Risk Identification**--The process of locating possible losses to which an entity is exposed.

**Risk Management**--The process of controlling the chance or possibility of financial loss.

**Risk Treatment**--The process of managing loss exposures once the exposures have been identified and evaluated.

**Safety Engineering**--The process of planning and implementing loss prevention strategies.

**Schedule**--A list of coverages or amounts concerning things or people insured.

**Scheduling Rating**--A system of rating in which debits and credits are added and subtracted from a base rate to determine the final rate for a particular insured.

**Self-Insurance**--Assuming risks through the maintenance of reserves or some other plan instead of through the purchase of insurance.

**Short Rate Cancellation**--Short rate cancellation occurs when the insured cancels an insurance contract prior to the expiration date of the contract.

**Sovereign Immunity**--A right reserved by government to preclude action against itself by virtue of its sovereignty and the necessity of making judgements in the interest of the state, which may, in fact, deprive some of property or other rights.

**Special Multi-Peril Policy**--A package policy under which coverage on an organization's property is combined with liability insurance. Many cities are eligible for coverage under the institutional program of the special multi-peril program.

**Speculative Risk**--An event that may result in either gain or loss depending on circumstances and judgement.

**Sprinkler Leakage**--Insures against all direct loss to building as a result of leakage, freezing, or breaking of sprinkler installations.

**Standard Fire Policy**--Standard form of property insurance contract adopted by the State of New York and used generally in all but four states since 1943. The contract is not actually an insurance policy but is a form outlining a simple insuring agreement, certain conditions, and specific exclusions.

**Standard Provisions**--Contract provisions in general use by insurers, adopted by a group of insurers, approved by a state insurance department, or required by statute, either literally, in substance, or in a form more favorable to the insured.

**Subrogation**--subrogation is the right of an insurer to recover from a third party an amount paid on a loss when the third party is at fault.

**Surety Bond**--An agreement providing for monetary compensation should there be a failure to perform specified acts within a stated period. The surety company, for example, becomes responsible for fulfilling a contract if the contractor defaults.

**Surplus Line**--Commonly used to describe any insurance for which there is no available market to the original agent or broker, and which is placed in a nonadmitted insurer in accordance with the surplus or excess line provisions of state insurance laws.

**Third Party**--Someone other than the insured and the insurer.

**Tort**--A private or civil wrong or injury independent of contract.

**Umbrella Coverage**--A type of excess all-risk liability coverage, normally written to apply to losses over the basic coverage, for large or catastrophic losses.

**Underwriter**--A person with the responsibility of selecting and rating risks to insure. The term is sometimes used to refer to an insurance company.

**Unearned Premium**--Premium paid in advance and represented by an unexpired period of coverage.

**Valuable Papers and Records Policy**--Indemnifies the insured for loss, destruction, or damage to valuable papers or records on an all risk basis, including misplacement or mysterious or unexplained disappearance.



**Vandalism**--The act of maliciously destroying or damaging property.

**Vandalism and Malicious Mischief Insurance**--Insurance against willful injury to or destruction of property by a person or people other than the insured.

**Waiver**--Voluntary surrender of a right or privilege known to exist.

**Workers' Compensation Insurance**--A method of providing for the cost of medical care and weekly payments to insured employees or to dependents of those killed in industry, regardless of blame for the accidents.



**APPENDIX B**

**TRANSIT AGENCY**  
**RISK MANAGEMENT QUESTIONNAIRE**





**TRANSIT AGENCY  
RISK MANAGEMENT QUESTIONNAIRE**

This questionnaire is designed to aid your agency in identifying and analyzing exposure to loss and in analyzing your agency's current risk management related procedures. The variety of transit agencies and their services make it impossible to include all exposures, but the questionnaire can be used as a starting point for identifying areas at risk, documenting the assets of your organization, and alerting you to exposures requiring future action.

**GENERAL INFORMATION**

1. Name of transit agency
  
2. Attach organizational chart (include affiliated boards, commissions, committees). Show where the safety department or safety function fits into the total organization.
  
3. Attach description of services provided. For example, hours/routes, fixed-route, local/express, demand responsive, rail, miles or hours of service in each type of service area, type of roadway (eg. local street, arterials, freeways).
  
4. List demographic breakdown of transit users (this breakdown may affect the type of losses your agency experiences):
  
5. Number of acres of paved parking areas \_\_\_\_\_
  
6. Board operations:
  - a. Are proceedings carefully documented? Yes \_\_\_ No \_\_\_
  - b. Do you have a program for informing board members of their responsibilities? Yes \_\_\_ No \_\_\_

**7. Names of members of board of directors and affiliations:**

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**8. Names and titles of various officers:**

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9. List all locations at which the organization maintains any property or activity. Owned, leased, rented -- bus terminals, bus shelters, transfer stations, offices, garages, maintenance facilities, gas stations, railway stations, storage facilities (Complete on separate sheet if necessary):

Location	Location Number	Address	Use

10. Attach:

- \* Safety/risk management policy statement
- \* Annual report
- \* Licenses
- \* Enabling legislation
- \* Charter

## FINANCIAL INFORMATION

1. Annual revenues

Passenger \$ \_\_\_\_\_

Tax \_\_\_\_\_

Subsidies \_\_\_\_\_

2. Is there a written statement of insurance policy?

Yes \_\_\_ No \_\_\_ Attach.

3. Who reviews insurance policies?

4. Attach copy of latest balance sheet, financial statement, budget, and other financial statements.

5. Does attorney submit all written agreements to person who handles insurance?

Yes \_\_\_ No \_\_\_

6. Does attorney review all contractual agreements?

Yes \_\_\_ No \_\_\_

7. Mandatory insurance coverages. List those in effect:

Coverage	Policy period	Premium

## EMPLOYEE INFORMATION

**Officers and Employees:**

Number of officers	
Number of professional personnel	
Number of security personnel	
Number of service employees	
Other	
Total number of employees	

	Yes	No
Are there written job descriptions for each position in the agency?		
Are pre-hiring background checks done on employees, transit police, etc?		
Is there an employee training program? Is safety a component of this training?		
Is there continuing education and training in operations, maintenance, and safety?		
Do you have an employee safety incentive or award program?		
Do you have an employee safety program in place (in addition to standard personnel operating and procedures manual)?		
Is employee performance evaluated on a regular basis? Attach copy of performance review policies		
Are there any written physical job requirements by category of employment? If yes, how were they established?		
Do you have disciplinary procedures for safety violations? Attach copy of policy.		

Are any following employees required to undergo certification:

	Yes	No
Controllers		
Operators		
Station Agents		
Transit Vehicle Mechanics		
Electricians		
Electronic Technicians		
Equipment Operators		
Dispatchers		
Other (List)		
_____		
_____		

**WORKERS' COMPENSATION**

Number of employees:

	# Union	# non-union
Full-time _____	_____	_____
Part-time _____	_____	_____

	Yes	No
Is first aid available at various locations?		
Are pre-employment physicals required?		
Are periodic check-ups given?		
Do workers' comp safety/loss prevention programs exist?		
Is there a safety committee?		
Does the agency support any recreational or "wellness" programs for employees?		



	Yes	No
Does the agency have programs in place that permit injured employees to return to work by assigning them to lighter duties until fully recovered?		
Does the agency provide retraining of employees who because of injury can no longer work at their old job?		
Any employees or volunteers under the age of 18?		
Is there a system to see that work permits are obtained?		
Are any employees routinely exposed to toxic substances, or undue physical hazard?		
Attach list of toxic substances if available.		

What are the "right-to-know" provisions in your state?

## OPERATIONS

Procedures, rules and practices for operations, coordination, and maintenance activities.(Requirements, lines of authority, levels of responsibility and accountability, and methods of documentation.)

### Operations

1. Do you have written operating procedures as they apply to safety?

Yes \_\_\_ No \_\_\_

Risk management or safety policy statement?

Yes \_\_\_ No \_\_\_

2. What department is responsible for analyzing safety rules and procedures?

3. Is there a single person responsible for the administration coordination, and update of a safety program on a daily basis? Yes \_\_\_ No \_\_\_ Name \_\_\_\_\_  
Title \_\_\_\_\_

4. Are there written safety responsibilities for:	Yes	No
Board of Directors		
General Manager		
Department Managers		
Supervisors		
Personnel		

5. Do you have an accident reporting procedure for:	Yes	No
Patron accidents		
Employee work-related illness or injury		
Unusual occurrences (incident which may affect service, threaten to involve injury to persons or damage to equipment on agency property, and or violation of any operations)		
Major accidents and incidents (ie. Board of Inquiry)		

6. Do you have a written accident investigation procedure?

Yes \_\_\_ No \_\_\_

7. Do you have an accident review board?

Yes \_\_\_ No \_\_\_

Who is responsible for assuring that corrections are made if deficiencies are found?

8. Hazardous materials programs:

\_\_\_ Right to know compliance

\_\_\_ Training (reporting requirements, inventory control and storage, product release or spill, and clean-up of spill incidents.

\_\_\_ Maintenance of chemical data sheets

\_\_\_ Underground storage tank technical compliance

9. Written procedures for:

Investigating passenger complaints?

Yes \_\_\_ No \_\_\_

Investigating employee safety complaints?

Yes \_\_\_ No \_\_\_

10. Is data maintained on:	Yes	No
Passenger/operator accident reports		
Employee injury reports		
Facility inspection reports		
Patron injuries		
Equipment failures		
Rule and procedure violations		

11. Do you utilize the following:	Yes	No
Safety posters and bulletins?		
Shop safety meetings?		
Discussion of safety topics in training programs?		

12. Are system and operational changes or modifications (e.g. routing changes, service & operator scheduling, bus stop placement, passenger shelters & other facilities) subject to prior approval on safety considerations? (Pre-production design review, report review, engineering test review, etc.)

Yes \_\_\_ No \_\_\_

Is there a written review procedure?

Yes \_\_\_ No \_\_\_

13. Do you have an education program for public safety?

Yes \_\_\_ No \_\_\_

14. Do you conduct inspections on the availability of detection and warning devices, protective equipment, emergency and rescue equipment?

Yes \_\_\_ No \_\_\_

15. Are there policies delineating who may communicate what to the outside world in the event of a crisis?

Yes \_\_\_ No \_\_\_

16. Contractor and Supplier Control. Does the agency employ contractors for:	Yes	No
Security services		
Maintenance		
Construction		
Employee Cafeterias		
Vending Machine Services		
Refuse Collection		
Janitorial Services		
Other		
_____		
_____		



17. Audit of system operations:

In-field inspections of rule and procedure violations?

Yes \_\_\_ No \_\_\_

Shop and station facility audits?

Yes \_\_\_ No \_\_\_

Coordination with other agencies

1. List the local, state and federal agencies with regulatory power or safety oversight of the transit agency. Also give a brief description of what those regulatory powers encompass, and describe any audits or investigations made by these agencies and the internal procedures for carrying them out. Use an additional sheet of paper (eg. state licensing of bus drivers, NTSB investigations, EPA requirements, etc.)

2. Who is responsible for ensuring compliance with the requirements of regulatory agencies and coordination with these agencies?

Who is responsible for meeting reporting requirements?

3. Who is responsible for coordination with other public agencies that provide emergency services (fire, police, city government)?

4. Who is responsible for coordination with employee unions (Union/Management Safety committee)?

6. Do you have training exercises to test emergency procedures, contingency plans, and the effectiveness of coordination with outside agencies in an emergency?

Yes \_\_\_ No \_\_\_

Scheduled \_\_\_ Unscheduled \_\_\_

Is documentation maintained? Yes \_\_\_ No \_\_\_

### Maintenance

1. Do you have written maintenance rules and procedures as they apply to safety?

Yes \_\_\_ No \_\_\_

Policy statement?

Yes \_\_\_ No \_\_\_

2. Do you have a process for assuring that purchases of equipment contain necessary safety devices or that new equipment design process requires safety features?

Yes \_\_\_ No \_\_\_

3. Is there a written quality assurance plan for bus and train maintenance?

Yes \_\_\_ No \_\_\_

4. Do you retain old vehicles for parts usage?

Yes \_\_\_ No \_\_\_

5. Do employees or volunteers perform maintenance for:

	Yes	No	Major or Minor?
Owned and occupied property (Include buildings)			
Personal property			

Major = Renovations, structural repairs

Minor = Routine maintenance (painting, repair, etc.)

6. Is routine maintenance work performed during:

Non-revenue hours? Yes ☐ No ☐

Operating hours? Yes ☐ No ☐

7. List the department responsible for the following (eg. engineering, maintenance, construction):

\*Plan review

\*Site inspection

\*Compliance with transit agency policy  
and procedure

\*Compliance with state, local, federal rules and regulations

\*Supply of material safety data sheets

## BUILDING INFORMATION

Complete this form for each building or other structure owned or controlled by the organization (ie, Bus terminals, railway stations, offices, garages, maintenance facilities, gas stations, storage facilities)

Building name \_\_\_\_\_

Location # (from general information section) \_\_\_\_\_

Location \_\_\_\_\_

1. Construction date \_\_\_\_\_

Square footage \_\_\_\_\_

Type of construction

Outside walls \_\_\_\_\_

Roof \_\_\_\_\_

Floor \_\_\_\_\_

2. Who is responsible for maintaining the physical plant?

3. How old is the wiring? \_\_\_\_\_ plumbing? \_\_\_\_\_

4. Have required inspections for code violations been performed by the proper government offices?

Yes \_\_\_ No \_\_\_

5. Describe any adjoining structures:

6. What is the building used for?



7. Value of building at:

Current market value \$ \_\_\_\_\_

Estimated replacement cost \$ \_\_\_\_\_

8. Latest appraisal \$ \_\_\_\_\_

9. Number of employees regularly working in the building \_\_\_\_\_

10. Would alternative space be immediately needed if building were destroyed?

Yes \_\_\_ No \_\_\_

11. Is the facility owned by the organization?

Yes \_\_\_ No \_\_\_

Name and address of mortgagee, if any:

\_\_\_\_\_  
\_\_\_\_\_

12. Rented or leased from others for an extended period of time?

Yes \_\_\_ No \_\_\_ Attach copy of lease agreement.

Current cost of comparable premises \$ \_\_\_\_\_

13. Are premises rented out to others for extended period of time?

Yes \_\_\_ No \_\_\_ Attach agreement.

Describe obligations of tenants with regard to repair and maintenance:

14. Are groups utilizing these buildings oriented to the safety features in the building before use? Yes \_\_\_ No \_\_\_

What are your provisions to determine who is liable for accident during the time of use?

15. Is there a joint use agreement on the property?

Yes \_\_\_ No \_\_\_

a. With whom? \_\_\_\_\_

b. What provisions are made in terms of responsibility for loss. Describe:

c. Attach copy of agreement

16. Fire protection information and equipment:

Number of extinguishers \_\_\_\_\_

Sprinkler system \_\_\_\_\_

Fire/Smoke alarm system? Local \_\_\_\_\_  
Central station \_\_\_\_\_

Watchman? \_\_\_\_\_

Distance to nearest fire hydrant or water source  
\_\_\_\_\_

Fire department station \_\_\_\_\_

Location of hose connections \_\_\_\_\_

17. Are safety inspections regularly performed on the premises? (Other than mandatory inspections by government entities)

Yes \_\_\_ No \_\_\_

By whom? Staff \_\_\_ Insurer \_\_\_ Professional consultant \_\_\_

## CONTENTS ANALYSIS

(Complete for each building listed above)

Building \_\_\_\_\_

Location Number \_\_\_\_\_

Value of owned	Replacement Cost	Actual Cash Value *
<b>1. Equipment</b>  Describe:		
<b>2. Furniture, fixtures</b>		
<b>3. Supplies (Exclude any warehouse type stock)</b>  Describe:		
<b>Electronic data processing equipment</b>		

\* Actual Cash Value: An amount equivalent to the replacement cost of lost or damaged property at the time of the loss, less depreciation.

**4. Improvements and betterments**

- a. Date installed \_\_\_\_\_
- b. Original cost \$ \_\_\_\_\_
- c. Replacement cost \$ \_\_\_\_\_
- d. Actual cash value \$ \_\_\_\_\_
- e. Describe:

**5. Value of equipment loaned, rented, leased to or from others**

Loaned (at another's premises):

Replacement cost \$ \_\_\_\_\_

Actual cash value \$ \_\_\_\_\_

Rented or Leased (on organization premises):

Replacement cost \$ \_\_\_\_\_

Actual cash value \$ \_\_\_\_\_

What is the agreement covering your responsibilities for these values? Describe:

**6. Employees' belongings:**

Replacement cost \$ \_\_\_\_\_

Actual cash value \$ \_\_\_\_\_



7. Any valuable papers kept on premises?

Yes \_\_\_ No \_\_\_

8. Are duplicates kept?	Yes	No	Separate Location?
Blueprints Payroll Records Accounts Receivable Accounting & Financial Records Lease agreements Grant records Licenses Contracts Titles Medical records Insurance policies Other (describe below):			

9. Are valuable papers stored in fire-proof cabinets?

Yes \_\_\_ No \_\_\_

10. Are records kept in file cabinets or in shelving with doors on the front?

Yes \_\_\_ No \_\_\_

11. Percentage of contents value subject to loss from water damage and sprinkler leakage \_\_\_\_\_

12. Are there back-up systems for data processing information retrieval?

Yes \_\_\_ No \_\_\_

Describe:

13. Other unusual or valuable belongings. List with values:

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## BOILER AND MACHINERY

1. Does the building have:	Yes	No
Heat, steam, or hot water boilers		
Air tanks or pressure vessels		
Compressors and pumps		
Transformers		
Electrical switchgear		
Fans or blowers		
Electric motors		
<p>For each "Yes", develop a schedule indicating location, make and model, rating and intended use.</p>		

2. Is backup equipment readily available?

Yes \_\_\_ No \_\_\_

3. Would damage or loss of any of the above require a suspension of operations?

Yes \_\_\_ No \_\_\_

Which machinery is particularly at risk? List.

4. Would the agency incur additional or extra expenses in the event of a boiler or machinery loss?

Yes \_\_\_ No \_\_\_

(See extra expense worksheet below).

5. Are goods of others in the care or control of the agency subject to loss from boiler or machinery losses?

Yes \_\_\_ No \_\_\_

6. Estimate the maximum probable loss arising from a single accident to:

Damage to boilers and machinery \$ \_\_\_\_\_

Damage to goods under the care of the agency  
(as a result of the accident) \_\_\_\_\_

Defense, settlement, and supplementary payment  
costs \_\_\_\_\_

Total \_\_\_\_\_

## **FLEET INFORMATION**

### **TRANSIT COACHES**

Year	Manufactur- er	Serial Number	Cost		Max. Gross Weight	Seated Capacity
			Actual Cash Value	Replacement Cost		

If necessary, complete on additional sheet or attach vehicle schedule.



	Yes	No
Are employee driving records screened? Licenses Motor vehicle record Minimum age limits		
Is there an operator training program in place?  If not, are employees or volunteers required to take defensive driving courses?		
Are drivers required to make safety checks before operating the vehicle?		
Are drivers required to fill out reports on each vehicle operated? (The report would indicate any defect or deficiency discovered by the operator or reported to the operator which would affect safe operation of the vehicle (ie, brakes, steering, tires, wipers, etc.))		
Are potential safety problems an established criteria for route selection, location of bus shelters, bus stops?		
Are regular checks made of load factors and schedule adherence? At what frequency? _____		
Are drivers instructed in dealing with emergency situations, such as evacuation of passengers, responding to injured passengers, or fires and accidents?  Does this include simulated emergencies?		
Do drivers receive instruction in first-aid?		
Are vehicles parked in same area? (Possibility for multiple loss)  In how many areas are vehicles stored? _____ Daytime? ____ Overnight ____		

1. Average length of time a bus is in operation?  
per day \_\_\_\_\_ lifetime \_\_\_\_\_

2. How long do you retain original copies of vehicle inspection reports and certification of repairs? \_\_\_\_\_

3. How often do maintenance personnel conduct preventative maintenance inspections on all vehicles? (ie. interior, body, engine, transmission, emergency equipment operation, road test).

4. Where are vehicles cleaned, inspected, repaired, and stored?

5. Who is responsible for the vehicle fleet within shop areas and in storage yards or garages?

6. Are the following standard equipment on vehicles:	Yes	No
Two-way radios		
Emergency alarm systems		
Fire extinguishers		
Push-out windows		
First-aid kits		

**AUTOS**

Type	Manufacturer	Year	License #	Use	Safety inspections

1. Are employee driving records screened?	Yes	No
Licenses		
Motor vehicle record		
Minimum age limits		

2. Is there a operator training program in place?

Yes \_\_\_ No \_\_\_

If not, are employees or volunteers required to take defensive driving courses?

Yes \_\_\_ No \_\_\_

3. Does the organization rent or lease vehicles?

Yes \_\_\_ No \_\_\_

What arrangements are made for liability:

4. Do employees or volunteers ever use their own vehicles on the job?

Yes \_\_\_ No \_\_\_

What are the insurance provisions for these vehicles? Describe:

5. Do employees drive cars of others?

Yes \_\_\_ No \_\_\_

6. Are employees permitted outside use of organization vehicles?

Yes \_\_\_ No \_\_\_ Describe policy for liability:

7. What type of safety inspections are undertaken? Describe:



9. Are vehicles parked in same area (Possibility for multiple loss)?

Yes \_\_\_ No \_\_\_

**OTHER MOBILE EQUIPMENT**

Describe all other mobile equipment owned or operated by the organization (ie. motor-cycles, forklifts, tow-trucks, riding mowers, etc.):

Manufacturer	Model	Serial Number	Replacement Cost	Location

1. Are there training programs on the use of the preceeding equipment?

Yes \_\_\_ No \_\_\_

2. Is specialized training necessary for operation?

Yes \_\_\_ No \_\_\_

Are driver qualifications tested?

Yes \_\_\_ No \_\_\_

## BUSINESS INTERRUPTION INFORMATION

1. What types of losses would necessitate shutting down operations? Describe:

2. In the event of a catastrophic loss, is it essential that operations resume immediately regardless of expense?

Yes \_\_\_ No \_\_\_

Describe operations which must continue:

3. Do you maintain a contingency plan outlining procedures for continuing operations in the event of a fire or other catastrophic loss?

Yes \_\_\_ No \_\_\_

4. Could your income be maintained if outside facilities are used?

Yes \_\_\_ No \_\_\_

Are other facilities available for use?

Yes \_\_\_ No \_\_\_

5. In the event that unsafe conditions or practices are discovered, does a particular officer have the authority to order such conditions corrected, including any subsequent interruption of revenue service?

Yes \_\_\_ No \_\_\_

6. In the event of destruction, how long would it take to resume operations and replace buildings or equipment damaged?

Location \_\_\_\_\_ Time \_\_\_\_\_

Location \_\_\_\_\_ Time \_\_\_\_\_

Location \_\_\_\_\_ Time \_\_\_\_\_

7. What materials, equipment, or supplies are especially hard to replace? List:

8. Extra Expense Information – the amount it would cost to continue operations (complete for each location)

Expense	Amount
Rental of temporary premises	
Salvage of papers, premises	
Cost of moving	
Cost of temporary equipment	
Cleaning services	
Security	
Cost of notifying patrons	
Overtime and additional payroll cost	
Rentals	
Light, heat, etc. at temporary location	
Transportation	
Miscellaneous expense	
Total Extra Expense	
Deduct expenses discontinued at original location because of loss	-
Net Extra Expense	\$

## CRIME AND FIDELITY INFORMATION

1. Maximum amount of cash, checks, etc. kept on any premises or by an individual (ie. driver) at one time \_\_\_\_\_

2. Is building (or buildings) protected by alarm system?

Yes \_\_\_ No \_\_\_

Location \_\_\_\_\_

Name of company \_\_\_\_\_

Certificate number \_\_\_\_\_

Expiration date \_\_\_\_\_

Location \_\_\_\_\_

Name of company \_\_\_\_\_

Certificate number \_\_\_\_\_

Expiration date \_\_\_\_\_

3. Is access controlled to all facilities?	Yes	No
Passes required		
Fenced yards		
Limited number of access locations		
Security force		

4. Does alarm company have keys to building?

Yes \_\_\_ No \_\_\_

5. Do the doors of the premises have double-deadbolt locks?

Yes \_\_\_ No \_\_\_



6. How is money transferred to bank?

Guards \_\_\_\_\_

Outside messenger \_\_\_\_\_

Employee \_\_\_\_\_

Maximum amount in one trip \_\_\_\_\_

Who is responsible for funds in transit? \_\_\_\_\_

7. How often are deposits made? \_\_\_\_\_ How often are transit vehicle cash boxes emptied? \_\_\_\_\_

8. How often are accounts audited by a certified CPA? \_\_\_\_\_

Does audit include analysis of internal controls?

Yes \_\_\_ No \_\_\_

9. How is payroll delivered? (if appropriate)

10. Internal controls:

a. How many signatures are required on checks? \_\_\_\_\_

b. Who signs checks?

c. Are bank accounts reconciled monthly?

Yes \_\_\_ No \_\_\_

d. Does the person who balances the bank statement have the right to co-sign checks or make deposits?

Yes \_\_\_ No \_\_\_

e. Are surprise audits performed periodically?

Yes \_\_\_ No \_\_\_

f. Are job duties performed by more than one employee?

Yes \_\_\_ No \_\_\_

g. Are petty cash vouchers pre-numbered?

Yes \_\_\_ No \_\_\_

11. Safe deposit boxes maintained?

Yes \_\_\_ No \_\_\_

Contents:

12. Where is cash kept? Describe safes or vaults and contents:

13. What types of fidelity bonds does the organization carry?

14. Are there training procedures for transit police?

Yes \_\_\_ No \_\_\_ Describe:

15. <i>Transit police requirements:</i>	Yes	No
Background checks		
Physical job requirements		
Certified		
By whom _____		

#### CLAIMS AND LOSS INFORMATION

Attach a copy of your organization's claims reports from all of the last five years. Your claims history can be obtained from your insurance company.

**APPENDIX C**

**TRANSIT AGENCY**  
**RISK IDENTIFICATION CHECKLIST**





**TRANSIT AGENCY  
RISK IDENTIFICATION  
CHECKLIST**

**Physical Property Values**

	X	Value	
		Replacement Cost	Actual Cash Value*
Audio/Visual equipment (Multi-media)			
Auto garages			
Boiler/machinery			
Bridges			
Buildings			
Owned			
Leased			
Under Construction			
Bus terminals			
Bus garages			
Chemicals			
Communication and signaling devices			
Computer equipment			
owned			
leased			
Electronic data processing equipment			
Equipment and machinery			
Boilers			
Air conditioners			
Compressors			
Electric generators			
Furnaces			
Water heaters			
Miscellaneous electrical			
Transformers			
Exercise equipment			
Furniture, fixtures, equipment			
Machine shop			
Machinery/heavy equipment			
Medical equipment/supplies			
Parking lots			
Pipelines			
Printing presses			
Promotional material			

	X	Value	
		Replacement Cost	Actual Cash Value*
Rescue equipment			
Roadside bus shelters			
Safety equipment			
Security devices			
Sidewalks			
Signs			
Stairways			
Storage tanks (Underground)			
Subway/train terminals			
Telephone equipment			
Tools			
Tracks			
Tunnels			
Uniforms			
Utilities			
Water			
Sewer			
Gas			
Electricity			
Vacant land			
Valuable papers			
Valuable records			
Leases			
Contracts			
Medical records			
Insurance contracts			
Other			
Watercraft/docks			
Wharfs			
Fleet			
Buses			
Mini-buses			
Vans			
4-wheel drive vehicles			
Cars			
Fueling vehicles			
Repair vehicles			
Emergency vehicles			

	X	Replacement Cost	Actual Cash Value*
Other  _____  _____  _____			
* Actual Cash Value : An amount equivalent to the replacement cost of lost or damaged property at the time of the loss, less depreciation.			





**APPENDIX D**

**RISK EXPOSURE CHECKLIST**



# RISK EXPOSURE CHECKLIST

Risk or Peril	FREQUENCY			SEVERITY		
	never	sometimes	often	limited	moderate	severe
Direct Loss						
Blizzard, Ice Storm, Hail						
Breakdown of machinery						
Collapse						
Collision						
Auto						
Non-Auto						
Contamination						
Corrosion, wear, abuse						
Crime						
Burglary						
Computer manipulation						
Counterfeiting						
Depositors forgery						
Employee dishonesty						
Forgery						
Fraud						
Misplacement						
Robbery						
Theft						
Electrical disturbance						
Explosion						
Failure of environmental controls (heat, air conditioning, humidity)						

PLEASE CHECK EXPECTED FREQUENCY AND SEVERITY OF EACH EXPOSURE

<i>Risk or Peril</i>	FREQUENCY			SEVERITY		
	never	sometimes	often	limited	moderate	severe
Falling objects						
Fire, arson, smoke damage						
Glass breakage						
Land movement						
Erosion						
Earthquake or volcano						
Landslide, avalanche						
Collapse						
Lightning						
Loss of utilities						
Obsolescence						
Poor maintenance						
Riots, civil disorder						
Strikes						
Unfaithful performance						
Unintentional error						
Counsel						
Computer						
Employee						
Vandalism, malicious mischief						
Water damage						
Flood						
Sewer backup						
Sprinkler system						

PLEASE CHECK EXPECTED FREQUENCY AND SEVERITY OF EACH EXPOSURE



<i>Risk or Peril</i>	FREQUENCY			SEVERITY		
	never	sometimes	often	limited	moderate	severe
Windstorm Hurricane Tornado						
<i>Indirect Loss</i>						
Business interruption Loss of service provider's facility						
Loss of use -- railbed, roadway Loss of garage facilities Boiler and machinery loss Strike						
Extra expense (operating alternative methods)						
Loss of earnings Passenger revenues Fees Federal and state grants Municipal bonds Tax Revenues						

PLEASE CHECK EXPECTED FREQUENCY AND SEVERITY OF EACH EXPOSURE

<i>Risk or Peril</i>	FREQUENCY			SEVERITY		
	never	sometimes	often	limited	moderate	severe
Municipal bond insurance						
Lines of credit						
Reserves						
Rental income						
User charges						
<i>Third Party Liability</i>						
<u>A. General liability for:</u>						
Bodily injury						
Injury from accident						
Disability (long or short-term)						
Death						
Property damage						
Auto						
Other						
Personal Injury						
Libel						
Slander						
Mental injury						
Defamation of character						
Invasion of privacy						

PLEASE CHECK EXPECTED FREQUENCY AND SEVERITY OF EACH EXPOSURE

<i>Risk or Peril</i>	FREQUENCY			SEVERITY		
	never	sometimes	often	limited	moderate	severe
Improper detention or eviction						
Malicious prosecution						
Discrimination						
Assault						
Trespass						
<u>General liability resulting from:</u>						
Premises						
Operations						
Motor vehicle liability						
Owned						
Leased						
Watercraft liability						
Owned						
Leased						
Products liability						
Sale of transit						
equipment						
Environmental pollution						
Gradual						
Sudden accidental						
Fire						
Explosion						

PLEASE CHECK EXPECTED FREQUENCY AND SEVERITY OF EACH EXPOSURE

<i>Risk or Peril</i>	FREQUENCY			SEVERITY		
	never	sometimes	often	limited	moderate	severe
Tank collapse						
Transformers						
Ordinary negligence						
Employees						
Contractors						
Other						
<b>B. <u>Contractual liability</u></b>						
Bus operations service						
Charters						
Concessions						
Construction						
Contracts of sale						
Insurance						
Joint facilities usage						
Leases						
Maintenance contracts						
Mutual aid agreements						
Notes, mortgages, loans						
Purchase order						
Rental agreements						
Sales or purchase orders						
Service agreements						

PLEASE CHECK EXPECTED FREQUENCY AND SEVERITY OF EACH EXPOSURE



<i>Risk or Peril</i>	FREQUENCY			SEVERITY		
	never	sometimes	often	limited	moderate	severe
Taxi handicapped pick up Vendors						
C. <u>Professional liability</u>						
Accounting services						
Advertising services						
Ambulance services						
Architecture						
Data processing						
Directors' and officers'						
Employee benefit program administration						
Lawyers						
Professional engineer E & O						
Other						
D. <u>Public Official Liability</u>						
Employee dismissal						
Failure to follow legally mandated procedures						
Failure to provide services						
Disciplinary action - employee						
Other						

PLEASE CHECK EXPECTED FREQUENCY AND SEVERITY OF EACH EXPOSURE

<i>Risk or Peril</i>	FREQUENCY			SEVERITY		
	never	sometimes	often	limited	moderate	severe
<b>E. Completed Operations Liability</b>						
Construction projects conducted by agency or contractor						
<b><i>Liability to Employees</i></b>						
Workers' compensation laws						
OSHA						
Employee benefit plan						
Administrative errors						
Fiduciary						
C.E.T.A.						
E.E.O.						
Disease (physical and mental)						
Drug addiction						
Alcoholism						
Hearing impairment						

PLEASE CHECK EXPECTED FREQUENCY AND SEVERITY OF EACH EXPOSURE

## **APPENDIX E**

### **SAMPLE AWARD AND INCENTIVE PROGRAM DALLAS TRANSIT SYSTEM**





## ARTICLE VII

### SAFETY PROGRAM

#### 7.1 Policy Statement

- A. It is the policy of the Dallas Transit System to provide and maintain a safe and healthful working environment for its employees and to assure safe and dependable bus transportation for its patrons.
- B. Safety is the highest priority in all departments. No operating requirement or other activity will take precedence.

#### 7.2 Awards and Incentive Programs

The Dallas Transit System will develop and maintain a variety of programs that recognize and reward those employees who demonstrate exceptional skills by performing their work over a prescribed period of time without "preventable" accidents or lost time on-the-job injuries.

##### A. Transportation Department

- 1) Safe Driver Award - This program was developed by the National Safety Council. It recognizes those employees with good safety driving records.
  - a) Under the safe driver award plan a driver's record is divided into two periods known as the proving period and the penalty period.
  - b) The proving period is the period of time required of the operator to achieve thirty-six (36) cumulative months of driving without a preventable accident. During the proving period a driver may be certified for the appropriate award based on the following performance:
    - 1 Year Award - Twelve (12) cumulative months of driving without a preventable accident.
    - 2 Year Award - Twenty-four (24) cumulative months of driving without a preventable accident.
    - 3 Year Award - Thirty-six (36) cumulative months of driving without a preventable accident.

- c) Should a driver have a preventable accident at any time during his proving period, he must begin all over again, starting with the date of the preventable accident trying to compile a record of thirty-six cumulative months without a preventable accident. Each time the driver succeeds in compiling twelve cumulative months of driving without a preventable accident, he/she is eligible to be certified for the appropriate award. Thus a driver may earn a one year or two year award several times. However, he/she earns a three year award only once. Having achieved thirty-six cumulative months of driving without a preventable accident, the driver moves from the proving period to the penalty period wherein the penalty for having a preventable accident is assessed in a different manner.
- d) Penalty period and penalty time - The date on which a driver earns a three year award becomes the anniversary date. This becomes the driver's regular date for earning a next higher award. This date does not change unless the driver is absent from work. During the penalty period a driver is penalized twelve months of driving time for each preventable accident in which the driver is involved. This is assessed against the driver by advancing the date the driver would be eligible for the next higher award by one year. The penalty is figured from the anniversary date and not from the date of the accident.

EXAMPLE: If a driver earned a three year award on August 23, 1980 and drives twelve months without a preventable accident, the driver will earn a four year award on August 23, 1981. However, if he has one preventable accident prior to August 23, 1981, the date the driver is eligible for the next higher award (four years) is advanced to August 23, 1982.

- e) A driver will be allowed to accumulate an absence of fifteen working days exclusive of vacation in any award period based on his anniversary date.
- f) Any number of days in excess of 15 working days pushes the anniversary date ahead a like number of working days.

NOTE: The safe driver award is in the form of a metal pin with the appropriate number of safe driving years earned. In addition to the pin, a wallet size card issued by the National Safety Council is awarded to the driver.

2) Efficiency Awards

a) Selection Criteria - In January of each year, each of the System's division superintendents will submit to the Superintendent of Transportation a list of operators working in each respective division that scored 100\* on each of the monthly grade reports that are kept on file for the previous calendar year.

b) Upon receipt of the list, the Superintendent of Transportation will then rank each operator, first by days absent from work (exclusive of absences due to vacation, holidays, or jury duty) and second by total hours worked.

(1) The top operators will be designated "Efficiency Award Winners" and will be presented with an "Efficiency Award" medallion.

3) Most Efficient Operator - Three of the four top operators, selected from the operators in (1) above, will receive "gold watch" awards; the fourth will be designated "Operator of the Year" and will receive a special plaque and \$250.

a) Operators will be permitted to win the "Most Efficient Operator" award in consecutive years if they so qualify.

b) \*For an operator to score 100 he must not have any of the following:

Preventable accident	Written reprimand or
Lose-out	case interview
Missed watch	Charged supervisor report
inspection	Charged complaint

B. Maintenance Department

1) Safety Award - This award plan was developed to reward those employees who do not have a lost time accident. Under this award plan the employee's record is divided into two periods known as proving period and penalty period.



- a) Proving period is the period of time required of the employee to achieve thirty-six (36) cumulative months of work without incurring a lost time injury. During the proving period an employee may be certified for the appropriate award based on the following performance:
- 1 Year Award - Twelve (12) cumulative months of work without incurring a lost time injury.
  - 2 Year Award - Twenty-four (24) cumulative months of work without incurring a lost time injury.
  - 3 Year Award - Thirty-six (36) cumulative months of work without incurring a lost time injury.
- b) Should an employee incur a lost time injury at any time during his/her proving period, he/she must begin all over again starting with the date of the lost time injury trying to compile a record of thirty-six (36) cumulative months. Each time the employee succeeds in compiling twelve cumulative months of no lost time injuries, he/she is eligible to be certified for the appropriate award. Thus an employee may earn a one year or two year award several times. However, when he/she earns a three year award of working without a lost time injury the employee moves from the proving period to penalty period wherein the penalty for having a lost time accident is assessed in a different manner.
- c) Penalty period and penalty time - The date on which the employee earns his/her three year award become the anniversary date. This becomes the employee's regular date for earning a higher award. This date does not change unless the employee is absent from work.
- d) During the penalty time an employee is penalized twelve (12) months work credit for each lost time accident that the employee incurs. This is assessed against the employee by advancing the date he would be eligible for his next higher award by one year. The penalty is figured from his anniversary date and not from the date of lost time accident.

EXAMPLE: A maintenance employee earned a three year award on September 10, 1980. If he/she works twelve (12) months without a lost time injury, the employee will earn a four year award on September 10, 1981. However, if he/she has one lost time injury accident prior to September 10, 1981 the date the employee is eligible for the next higher award (four years) is advanced to September 10, 1982.



f) A maintenance employee will be allowed to accumulate an absence of fifteen (15) working days exclusive of vacation, floating holidays, incentive vacation days or jury duty in any award period based on the employee's anniversary date.

g) Any number of days in excess of fifteen pushes the anniversary date ahead a like number of days.

NOTE: The award is in the form of a metal pin with the appropriate number of no lost time injury years.

- 2) Maintenance Efficiency Award - In the attempt to recognize employees with an outstanding work record, a maximum of ten maintenance employees who receive a no-lost time safety award will be designated as the System's "Efficient Maintenance Employee". In determining which employees will be designated as such the Superintendent of Maintenance will rank each employee on the basis of the following format:

<u>DAYS ABSENT</u>		<u>SUPERVISOR REPORTS</u>		<u>OVERTIME WORKED</u>	
0 days +	10 pts.	0 reports +	20 pts.	0 --	40 hrs. + 10 pts.
1 " +	8 pts.	1 " -	10 pts.	41 --	80 hrs. + 12 pts.
2 " +	6 pts.	2 " -	15 pts.	81 --	120 hrs. + 14 pts.
3 " +	5 pts.	3 " -	20 pts.	121 --	160 hrs. + 16 pts.
4 " +	4 pts.	4 " -	25 pts.		
5 " +	3 pts.	5 " -	30 pts.		
6 " +	2 pts.	6 " -	40 pts.		
7 " +	1 pts.				
8 " +	0 pts.				
9 " -	1 pts.				
10 " -	5 pts.				
11 " -	6 pts.				
12 " -	7 pts.				
13 " -	8 pts.				
14 " -	9 pts.				
15 " -	10 pts.				

#### ACCIDENTS

<u>VEHICLE (Preventable).</u>	<u>PERSONAL (Lost time)</u>	<u>EQUIPMENT</u>
0 + 20 pts.	0 + 20 pts.	0 + 20 pts.
1 - 10 pts.	1 0 pts.	1 - 10 pts.
2 - 15 pts.	2 - 5 pts.	2 - 15 pts.
3 - 20 pts.	3 - 10 pts.	3 - 20 pts.
4 - 25 pts.	4 - 15 pts.	4 - 25 pts.
5 - 30 pts.		5 - 30 pts.
6 - 35 pts.		6 - 35 pts.

NOTE: The award is in the form of a medallion. Employees will be permitted to win the award in consecutive years if they qualify.

- 3) Most Efficient Maintenance Employee- In a further attempt to recognize employees with a truly outstanding work record one maintenance employee who received an "Efficient Maintenance Employee" award will be designated as the System's "Most Efficient Maintenance Employee." The Superintendent of Maintenance will select the top "Mechanic of the Year" award recipient.

NOTE: The employee selected will be presented with a special plaque and a \$250 award in addition to the medallion. Employees will be permitted to win this award in consecutive years if they qualify.

- 4) In addition to the above programs, the Dallas Transit System will periodically reward certain groups of employees for group accomplishments.

### 7.3 Operator Performance Bonus

- A. Effective October 28, 1985, operators are eligible to earn \$25.00 per two-week pay period in addition to normal wages provided certain established criteria relating to job performance are achieved. Each pay period is considered separately; therefore, a disqualification one pay period has no effect whatsoever on one's ability to qualify the next pay period.
- B. To qualify, an operator must not have a preventable accident during the pay period, not have received a suspension or corrective case interview or other written reprimand, always be on time (no loseouts or credited late-to-work charges) and no unexcused absences during the pay period. In addition, operators must work at least one-half of the scheduled work days in the pay period regardless of allowable absences. Allowable absences include paid holidays, jury duty, death leave, work related injury, military leave, an authorized excused absence by the division superintendent, or sickness that does not result in written reprimand. All other absences, except scheduled vacations, will disqualify an operator from bonus consideration for that one pay period only.
- C. Earnings under the operator performance bonus program will be eligible earnings under the Dallas Transit System sponsored retirement plans.

### 7.4 Accident Statistics and Reports

- A. The Dallas Transit System will maintain updated system statistics, reports, and comparison studies with other transit properties to measure the System's relative safety performance.

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